DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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AUGUST.

"There's music in the dawning morn,
Ere the lark his pinion dries—
'Tis the rush of the breeze through the dewy corn—
Through the garden's perfumed dyes."

Men breathe freely again; the burden of the *Hay* and *Grain* harvest is over. The weather has been propitious, and the bays and scaffolds swell with the rich treasures of the newly shorn fields.

"August," says a beautiful writer, "is that debatable ground of the year, which is situated exactly upon the confines of summer and autumn; and it is difficult to say which has the better claim to it. It is dressed in half the flowers of the one, and half the fruits of the other; and it has a sky and temperature all its own, and which vie in beauty with those of the spring."

The whole face of Nature has undergone, since last month, an obvious change. The dark green of the corn-fields now beautifully contrasts with the brown stems of the grass roots, while the stubble of the early harvest is only left of the recent waving fields of golden grain.

The trees and shrubs and fields are still green, "but not the fresh and tender green of the spring, nor the full and satisfying green of the summer; but many greens, that blend all those belonging to the seasons first named, with others more grave and more bright, and the charming variety and interchange of which are peculiar to this delightful month, and are more beautiful in their general effect than those of either of the preceding periods; just as a truly beautiful woman is perhaps more beautiful at the period immediately before that at which her charms begin to wane, than she ever was before."

The season grows old in animated life, too. New voices disturb the hot and listless noon, or swell on the evening air. The birds have paired, nested, and reared their young, and now in "sober russet clad," gather in garrulous joy, or sport in airy circles about the old trees of the farmer's home.

In England, this month, *their great harvest season*, is one of gladness. *Here*, we rush on to see how large a crop we can raise and gather in without any outward expressions of gratitude and delight. But *there*, Leigh Hunt says, our ancestors used to burst into an enthusiasm of joy at the end of harvest. They crowned the wheat sheaves with flowers, they sung, they shouted, they danced, they invited each other, or met to feast, as at Christmas, in the halls of rich houses.

We like these outward expressions of joy; they are sympathetic, and touch the whole nation's heart. Our great harvest, the Indian Corn Harvest, is followed by our annual festival, Thanksgiving, in which nearly all our people participate. But, as with the English people, we should like some ceremonies in the fields, some crowning of the sheaves, some relaxation from stern labor, and joyous gatherings of the young and old to commemorate the harvest scenes. We copy the customs of our ancestors in many things—we should be glad if our people would do so in some of their Harvest Scenes.

CALENDAR FOR AUGUST.

Within our recollection, and within our own practice, but under the direction of others, haying was not concluded until the first week in September; the last week in August or the first in the following month being thought early enough for cutting the meadows. The period usually occupied now, in this important part of husbandry, does not occupy one-half the time that it did forty or fifty years since. Many farmers who cut fifty to a hundred tons of hay in a season, accomplish it within the space of ten to twenty days, and get it in better condition than it used to be when two months were occupied.

This is one of the important improvements in farming, which has been effected by labor-saving implements, and by a better knowledge of the nature of, and better modes of preserving, the nutritious qualities of the grasses.

Meadows, this year, when hay will be somewhat scarce and high, should be cut early in August, if they have been omitted until that time. If cut when the grass is tender and succulent, most of it will be consumed by the stock if fed in the morning during the coldest weather. Indeed, we have often found milch cows preferring one or two fodderings of meadow hay in the day, to that of the best English. They like variety, and will thrive better for an occasional feed of inferior hay. It also answers a good purpose, cut, and mixed with better hay or straw, and Indian or oil meal. It is all worth saving in good condition this year.

The Turnip Crop.—This crop, in its varieties, is always important, but particularly so when the hay crop is short. It will be well to sow the flat turnip as late as the first week in August; the expense of seeding is small, so that if the crop fails, the loss is trifling; if the season proves favorable, a fine crop may be obtained and the winter's supply of fodder greatly enhanced.

Attention must be given to the ruta bagas and mangel wurtzels. All weeds should be taken out and the plants thinned so as to give each ample room to expand itself into a good size and shape. The distance required will depend much on the richness of the soil. If that be in good condition twelve inches between the plants will be none too much. The crop will be benefited by hoeing in good super-phosphate of lime or dissolved bones. Do not neglect the turnip crop.

Reclaiming Meadows.—Every observing cultivator must have come to the conclusion that the best lands of New England lie in our low grounds, or even the boggy swamps which are scattered all over it. When once subdued, no lands yield such ample returns for the expense incurred, or remain in good condition so long without being again broken up. It is scarcely necessary to repeat what we have so often said on this subject, but refer the unpracticed to an article in another column on "Swamps and Draining," and to the last year's volume, under "Farm Work for September."

August, also, is a good time, perhaps the best, for breaking up and laying down old grass lands that have "run out." The process is simple—plow deep, manure well, turning it under two or three inches with the cultivator or harrow, and seed liberally. The manure used in such cases, should be fine, so as to mingle thoroughly with the soil. Twelve quarts of herds grass and three pecks of red-top seed, are sufficient for an acre. Sow six pounds of clover seed per acre, on a light snow in March.

Grape Vines.—Everybody likes grapes. There is scarcely a person who has a garden but adorns it with a grape vine. Great efforts are being made to introduce varieties that are delicious and hardy; by-and-by, we shall succeed. The old idea, long entertained, that the leaves must be stript off in order that the fruit might ripen, has nearly lived out its day. It only lingers, like a heavy brick, in the noddles of some of the "old fogies," who are determined that the world shall be no wiser than they themselves are. As well may we strip the apple tree of its leaves that the sun may enter and ripen the fruit, or tear off a man's arms and legs, that his head may sooner be ripe with wisdom! No, no—let the leaves alone; they kindly prepare rich juices for the fruit, as the bird prepares food for her young. Nature is accommodating in some things; the tree does not object to send its unelaborated sap into the veins of scions not her own, and comfort and protect them, but she will not be turned from her proprieties in other things. She cannot be robbed of her lungs or leaves, and produce good blood or fruit.

Grains.—The grains which have cost you so much labor, which you have cut and garnered up, will still require care. If frequented by rats and mice, the loss is not only in what they consume, but in shelling it out and mixing it with their offal. By thrashing and clearing up early you will find a more favorable return from your acres.

Celery.—This is a wholesome winter salad; easily raised and always brings a fair price in market. It ought to be common among all classes. The earthing up about the plants must be carefully attended to this month. Gather up the leaves neatly and not bury the hearts of the plants.

Beans and the early kinds of cucumbers may be planted for pickles, if done immediately; herbs, such as are desired, must be saved now; the sage cut and dried, and hops picked and dried.

Budding.—The season has again approached when this operation may best be performed. The process is so familiar to most persons, that we will only refer the uninitiated to our former remarks on the subject.

Haul out Muck.—Now that the swamps are mostly dry, and the haying is out of the way, the opportunity should be improved to go into the *muck mines* and remove large quantities to the high lands. Spread it shallow on pasture, or on grass lands which are to be plowed, so that the winter frosts may penetrate the whole heap and thus prepare it for use.

A shovel full of meadow muck, and a half gill of guano in a hill for corn, will give about thirty bushels to the acre on almost any land that is not utterly impoverished.

☞ *A Noble Act Rewarded.*—Rev. Rufus W. Griswold has presented to Mr. Linus Benedict, of Norwalk, (who saved the life of his daughter, at the Norwalk calamity, after she was supposed to be drowned,) a very costly gold watch and appendages, as an evidence of his gratitude and that of his family, for his extraordinary and successful efforts on that occasion.

For the New England Farmer.

COMPOSTING.

BY H. F. FRENCH.

"I should like to have you tell me what is the advantage of hauling a great lot of common soil into a barn cellar, and then hauling it out again, into the field? Why is not it just as well to plow in the green manure and let it mix in the ground!"

This question, proposed by a working man, desirous of a rational reply, suggested to me the idea of saying something on the subject of Composting.

By supplying our yards and cellars with common soil in proper quantities, we retain the liquid portion of the manure, which must otherwise be mostly lost, and we prevent the evaporation of the volatile elements which exist in all manure. In the case of stable manure we also prevent loss by heating, and fire-fanging. Now it does not require a vast addition of soil, to effect all these objects, and as carting this material is very expensive, true economy tells us to reflect upon the objects in view, and stop when we have attained them.

If you can carry out at ten loads, the same elements of fertility that you have heretofore carried out at twenty, you have gained, by saving it, three or four dollars worth of labor, which, in the spring of the year, is worth minding. *Quantity* is not always *value*. More than eighty pounds of every hundred of barn-yard manure, hauled into the field, are nothing more nor less than *water*, just such as the clouds will give us in abundance, about planting time. Let the farmer keep this in mind as one guiding principle, that manure is valuable, not for its *bulk* or *weight*, but for its fertilizing properties, which make but a small part of either.

Again, we frequently see farmers in a bright, windy April day, expending much labor in composting in their fields, shoveling over and over again, their manure heaps, often mixing *nothing* with them, and oftener perhaps, road-side sand or worthless soil. We will speak of the *gain* presently. The *loss* by the operation is manifest to more senses than one. It was stated in a public lecture by a learned chemist, that about *one-fifth* of the value of a heap of stable manure would escape by evaporation in such a day as I have named, by a single shoveling over and shaking up in the usual way.

Let the farmer bear in mind, as another guiding principle, that one of the most valuable constituents of the manure heap—*ammonia*, is also one of the most volatile. It has little more than half the weight of common air. It is the same compound that is used by the ladies, as *smelling salts*, and the same which often, almost suffocates you, as it does also your horse, in the stall at your stable. Whenever your sense of *smelling* gives warning, then you may know, that the air is carrying off your manure heap, though invisibly, often as rapidly as an Irishman could do it, with a wheelbarrow.

For hoed crops, the old way of plowing in the manure as it comes from the yard is often, the true economy. Nothing is then lost by evaporation, and no labor is expended in repeatedly handling it over.

But for gardens, for top-dressing for grass and for harrowing in, for any purpose, coarse manure cannot well be used. Spread upon the surface, its whole value is almost lost, and the harrow will not cover it. It *must* be composted for convenience and economy. This is best done in the barn cellar, and if done elsewhere, a still moist day should be chosen for the work.

Thus far, I have spoken only of composting with *common earth*. Few farms are so poor as not to afford something better. If the compost is for sandy land, *clay-loam* or clay pulverized by frost, may often be used to advantange. It is desirable to save *ammonia*, which, as has been said, is a very hrad creature to keep. A good cork is necessary to confine it in a bottle. Now it happens, that *clay* has the power to attract and retain ammonia greater than any other kind of soil, so that a double advantage may be gained in some cases by its use, even in large quantities. To pine sandy lands, I have applied twenty cart loads of clay to the acre, at once, with advantage. Composting it with stable manure renders it less compact and more friable.

On the other hand, upon a *clayey* soil *sand* is of great use, especially when applied to the surface in laying it to grass. And to black swamp meadows, sand is frequently indispensable to the growth of a crop of grass. For such uses, then, it may be the very best economy, to use in compost, large quantities of sandy loam or even of pure sand, if nothing better offers.

A half inch of sand, upon a bog or clay meadow, will do much towards preventing *the heaving by frost*, which often ruins our newly sprouted grass.

Clay and sand are, however, but mere amendments of the soil, operating for the most part mechanically, the *clay* rendering *sandy* soil more compact and retentive of water and manure, the *sand* rendering *clay* soil more open, and peremable to the air, and the roots of plants. In addition to this, as has been already hinted, sand supplies to bog meadows a substance known by the name of silex, not usually found in such soil, which enters largely into the formation of the stalks of all plants, appearing as pure flint, on the stalks of rye and other grain.

There exists, however, within reach of almost every farmer, another class of materials of vastly greater value than any that have been named, in the form of *swamp mud* and *peat*. These deposits differ very widely, some having very little value, and others having almost precisely the same constituent elements as barn manure. Usually they contain the same elements which constitute barn and stable manure, except ammonia. This ammonia, we have seen, exists in cow and horse manure in larger quantities than they can alone retain. By using them in our barn cellars, or compost heaps, swamp mud or peat, we actually add to the mass most of the valuable constituents of manure, and at the same time retain the volatile part, which would otherwise escape, and which alone is needed to make the muck itself a valuable fertilizer. Very few deposits of swamp mud have been found, which have not proved valuable when composted with barn or stable manure. Occasionally, a deposit is found which is valuable, applied to the land directly from the bed whence it is dug. Usually an exposure of one or two years to the action of frost and the atmosphere, or the application of caustic lime or of lime slaked with a solution of salt, will neutralize the acids which exist in most swamps.

A careful attention to the reason of things, a constant endeavor to understand as far as may be the principles of vegetation, and the operation of various fertilizers upon the different crops and soils, will lead to more useful results than any general rules of practice that can be given. H. F.

Exeter, N. H., 1853.

For the New England Farmer.

MONTHLY FARMER FOR JULY.

July! Who can think of July, and forget Independence? Not the boys, if they can get crackers. Nor the men, if they contrast their situation with that of their European brethren. The world probably needed just such a specimen of old-fashioned despotism. Liberty of the press, of speech, of thought, of locomotion,—will now be better understood. But this is not reviewing the *Farmer*, with its almost interminable contents. Orators and writers when they wished to round off a period with an idea of the vastness of our field, used to say, sometimes, "from Maine to Florida." The correspondents of the *Farmer*, in the Provinces of the North, in the Sandwich Islands, and along the Pacific coast, open to us a field so much more extensive, as almost to provoke a smile at this expression.

THE FIRST TWELVE PAGES—

Contain articles from

The Editor.	Prairie Farmer.
S. P. Fowler, Danversport.	O. V. Hills, Leominster.
The Editor	Howitt.
B. B. H., Baltimore.	The Editor.
Culturist and Gazette.	P.
J. N. M., Georgetown.	A. S. R., Lincoln.
M. A. Perry, Watertown.	J. S. Greene Sandwich Islands.
S. G. B.	Peter Fay, Southboro'.
The Editor.	Richard C. Stone, Southboro'.

In the salutatory "Calendar" the editor, as he loves to do, blends the sentimental and the practical. Believing that even farmers have heads as well as hands,—hearts as well as stomachs, he would point out the beauties as well as suggest the hard labors of this "fervid noon" of the year. The fifth number of the "Birds of New England" describes particularly the Meadow Lark, the Golden Robin, the Red-winged Blackbird, and the eccentric Cow Blackbird. Remarks on "Ridging and Draining," with directions for the work. "when necessary," are succeeded by a very interesting article on "Strawberries near Baltimore." Some sensible comments on "The Turnip Crop," which somehow appears to be a much greater favorite with "book-farmers" than with the practical ones of my acquaintance. Short articles, giving a remedy for the "Potato Rot;" how to "Preserve Manures;" suggestions on "Watering the Garden," with cuts of implements; directions for raising "Buckwheat;" some good "Summer and Autumn Apples" recommended; observations on "German Agriculture," that reminds us that we have lessons yet to learn in economy, especially of manures; and valuable and minute directions for building cisterns, more interesting to those who have a "great fuss" every washing day to haul soft water, than to those who, like "our folks," have a never-failing well of clear, soft, cold water;—bring us to an agricultural communication from the Sandwich Islands, written, not by some stray sailor, or transient visitor, but by one who raised 400 bushels of wheat on his farm there, last year. The weevil, the cut worm, and other injurious vermin, afflict the Hawaiian as well as the New England farmer; but worse than all, says Mr. Greene, is the fact that farming is in low repute—the people naturally indolent, prefer any means of subsistence to honest toil. An article on "Plows," and one on "the Variety of Borers," complete our first lesson.

THE SECOND TWELVE PAGES

Contain articles from

The Editor.	S. E. Hooker, Poultney, Vt.
Stock Register.	T. A. S., Westboro'.
Silas Brown, Wilmington.	J. R., Concord.
A. Todd, Smithfield, R. I	The Editor.
The Editor.	Wool Grower, Cheshire Co.
J. R., Concord.	The Editor. [N. H.
W. D. B., Concord.	Farm Journal
The Editor.	S. F., Winchester.
Olive Branch.	Philadelphia Paper.
A. Todd, Smithville, R. I.	St. Vincent Mirror.

"A Day with the Great Plow" tells us of plowing furrows 12 inches deep, and 18 wide! Statistics on the difference between the "Live and Dead Weight of Cattle," is followed by some strictures on a criticism of "Experimental Farming." Following which are valuable articles on "Plaster, Ashes, &c.;" "Action of the Atmosphere on the roots of Plants;" description of the new "State Pauper Farm," in Tewksbury; explanation of the "Circulation of Sap;" remarks on "Orchards," and a "Chapter for nice old Farmers." The "body" that undertakes to tell Fanny why country folks live in the rear of the house, will please inform me why it is that city people live in the cellar, while they have so many stories above ground. Then we find a protest against "Cruelty to Animals;" Mr. Hooker's successful method of "Grafting Old Trees;" and comments on "Diversity in Theory and Practice." In my observation among practical farmers I have never been much troubled by the "chaos of theory and practice," which the writer of this article so feelingly deplores. Is there greater uniformity in the prosecution of any other business? Indeed, are not we old farmers charged with following traditions—of doing, generation after generation, as our fathers did? "The true mode of Cultivation" is the caption of an article on State Pauper Farms, in which the writer suggests that they may be so managed as to "be patterns to all the surrounding country." The result of the "Visit to the State Reform School" farm—given on the next page—does not seem to me to afford much ground for these sanguine hopes. Have Town Poor-farms often proved models, either as to crops or profit? But it is well that public attention is turned to these State institutions—they cannot be watched too closely, lest they prove hot-beds of abuse and mismanagement, instead of "models." But we must proceed to a defence of "Lunar and Stellar Influence;" comments on the late "Mt. Airy Agricultural Institute," in which the writer attempts to show that all similar schools are antagonistic to the New England system of free schools; a sarcastic account of a clover-seed speculation; and a notice of a kind of earth found in St. Vincent more valuable for manure than guano.

THE THIRD TWELVE PAGES

Contain articles from

The Editor.	C. D. Stuart.
W., Chester, N. H.	Granite Farmer.
The Editor.	Maine Farmer.
M Perry, Watertown.	A Reader, Winchester.
The Editor.	The Country Gentleman.
Pittsfield Culturist.	H. F. French, Exeter, N. H.
The Editor.	Horticulturist.

This division commences with a fine picture of the "Yellow Siberian Crab." "Charcoal" recommended as a fertilizer. Is not this tantalizing to nine-tenths of the farmers in New England, who would not know where to find charcoal enough to smut their faces with! "Composting"—a recipe for an acre, including "twenty bushels of lime," is followed by a scientific kind of article on "Manures," in which the writer says "the mixing of caustic lime with dung is a most baneful practice." A valuable dissertation on the "Food of Plants," is followed by some explanations of the action of the U. S. Agricultural Society on a paper by Prof. Booth on Analysis of Soils, that places the matter in a more favorable aspect, than did the report published in the *Farmer*. Account of a trial of plows in Ipswich, with a notice of a new "Horse Hoe;" Poetical origin of Flowers; a lesson that taught one man to be careful of horses, and suggests the query, are not men often injured in the same way—violent exercise with a full stomach. A description of the "Onion Worm," with accounts of diverse failures of remedies. Review of the "*Monthly Farmer* for May." An article on "Soiling" is followed by one showing an investment in weeds, however large the dividends may be, is a poor one for farmers. "Flat *vs* Hill Culture" discussed, and we then have another of those playful letters from the New Hampshire associate editor. Does your "short cut" to a hay crop *pay*? After the trees or stumps are dug out by the roots, your process would cost me, here, over $70 per acre to prepare the land for seeding. This division closes with a notice of a splendid book on North American trees, costing $45. Such works ought to be purchased by town libraries, instead of expending all their funds on cheaper and more accessible books.

THE LAST TWELVE PAGES

Contain articles from

J. H. R., Dorchester.	Essex.
Wisconsin Farmer.	G. F. W.
Genesee Farmer.	Agricultural Gazette.
——, May 31, 1853.	H. F. French.
F. Holbrook, Brattleboro', Vt.	A Subscriber.
Granite Farmer.	Albany Cultivator.
Scientific American.	Henry Eddy, M. D.
Geo. P Burnham.	Editor and Correspondents.
J. R., Concord.	Richard C. Stone.

The foremost article of our last division rejoices in the caption "Witch Grass—State Chemist"—the first part of which gives directions for exterminating this pest of our fields by plowing; while the last part of the article seems to indicate a belief that there is somewhere in the "upper regions" a vast quantity of agricultural knowledge bottled up, and that a State chemist, an agricultural college, or something of the sort, is necessary to draw the corks, and let a refreshing stream flow in upon the parched minds of farmers. In the next article, "Education of Oxen," the writer says "No man can be a good teamster, who is not a gentleman." Something in that. "Hints on thinning Fruit"—quite unnecessary in this section, where the curculio, &c., save us all trouble in this line. An experiment in feeding cut corn-stalks; "Influence of Horticultural Societies," and "The Climate of Countries," carry us over to a cut of "Fancy Lop-eared Rabbits"—funny looking things they are! We now have another chapter on the State Pauper Farm, and one on the State Reform School. The writer of the latter article says, "I doubt not as much talent and as much virtue can be found in a hundred of these boys, as in a hundred of the same age in any of our colleges." And these boys, as I understand it, are the legal skimming of our whole State. Collect a hundred of the most vicious horses in the State, and will "Essex" call it a "great mistake to suppose them more disposed to evil" than an equal number that should be selected for their docility! Notice of "A New Enemy in the Field;" "Orchards—Muck—Ashes;" "Order in Everything;" an instructive page of "Extracts and Replies," with articles in the Ladies' and Boys' Departments, conclude our review of the *Monthly Farmer* for June. A READER.

Winchester, June, 1853.

THE MILK-MAID AND THE BANKER.

A milk-maid with a very pretty face,
Who lived at Acton,
Had a black cow, the ugliest in the place,
A crooked-backed one,
A beast as dangerous, too, as she was frightful,
Vicious and spiteful,
And so confirmed a truant, that she bounded
Over the hedges daily, and got pounded.
'Twas all in vain to tie her with a tether,
For then both cord and cow eloped together.

Armed with an oaken bough (what folly!
It should have been of birch, or thorn, or holly,)
Patty one day was driving home the beast,
Which had, as usual, slipped its anchor,
When on the road she met a certain banker,
Who stopped to give her eyes a feast
By gazing on her features, crimsoned high
By a long cow-chase in July.

"Are you from Acton, pretty lass?" he cried;
"Yes," with a curtesy, she replied.
"Why then you know the laundress, Sally Wench?"
"She is my cousin, sir, and next door neighbor."
"That's lucky, I've a message for the wench,
Which needs despatch, and you may save my labor.
Give her this kiss, my dear, and say I sent it,
But mind, you owe me one,—I've only lent it."

"She shall know," cried the girl, as she brandish'd her bough,
"Of the loving intentions you bore me;
But as to the kiss, as there's haste, you'll allow
That you'd better run forward, and give it my cow,
For she, at the rate she is scampering now,
Will reach Acton some minutes before me."

For the New England Farmer.

HILLING PLANTS.

MR. EDITOR:—In your last No. I notice an article from the *Genesee Farmer*, entitled "Corn, Flat vs. Hill Culture." Most of the ideas I like well. If nature had designed more earth around the corn stalk, would she not have made it grow deeper in the ground? I guess she would have done so,—and if nature has made the proper part of the corn plant grow out of the ground of itself, why may we not suppose that she has properly arranged the potato and all other plants? If she has made them right, then all our hilling is wrong—if she has made a mistake in one case what reason have we for knowing that anything is made right?

I find that if I hill up trees it kills them, instead of helping them to stand up strong.

Won't Mr. *Genesee Farmer* tell us how he knows that Providence made a mistake in letting suckers grow on the corn plant; he, of course, would not destroy them if he did not think so. I was brought

up to think that "He (Providence) "doeth all things well." If he does, let us look at his works and not endeavor to improve them, except so far as we can by making everything tend to supply natural wants.

ONE WHO HAS MUCH TO LEARN.

New Haven, Conn., July, 1853.

SWAMPS---DRAINING.

There is no month of the year more favorable for draining and reclaiming swamps than August. VON THAER, author of the *Principles of Agriculture*, in that section of his work devoted to a consideration of the system of draining, says :—

"A proper degree of draining tends to protect crops from injuries which are the result of excess of moisture, and contributes materially to ensure their success. This operation alone, has often been sufficient to render extensive sterile plains exceedingly fertile."

There are probably few farms of any extent, on which drains are not more or less necessary.—Swamps and bogs exist in most sections, and these can never be profitably worked, or rendered of any essential benefit to their possessors till they have been thoroughly ameliorated by opening channels for the passage of all the superabundant water they contain. Draining, in this case, must necessarily precede all other improvements, and if it be not thoroughly and systematically accomplished, the operator will find all his subsequent efforts of no avail.

As an instance of successful and economical draining, we may mention the case of the Rev. D. Huntington, from whose communication to the committee of the Hampshire and Hampden Agricultural Society, we gather the following facts :—

"A few years since," says Mr. H., "this land was a swamp covered with bogs, and brakes and bushes—the haunt of snakes and frogs and mud-turtles—an entire waste." It was not only useless, but being located in the immediate vicinity of his homestead, was a constant eyesore, an probably unhealthy. In reclaiming it, he first cut the bushes, and then opened a ditch three feet wide, and two and a half feet deep, extending through its whole length. The bog heads were then cut, taking off the entire surface where it was thought to be necessary, and removed to an adjacent lot, the soil of which was sandy. Here they were made to act as manure, and being intimately mixed with it, they soon so far improved its capacities, as fully to recompense him for the cost and trouble involved in their removal.

The greater part of this soil has had crops upon it, and some parts repeatedly, and the whole, at the time the report was presented to the committee, was fit for the plow. What the expense was, Mr. H. expressed himself unable to state, but was confident it bore no proportion to the improved value of the land. The cutting the bushes, opening the ditch and removing the "bog-heads," could not involve a very heavy outlay, as the work was performed at "odd jobs," and when, probably his help had little else to do. The *Northampton Courier*, in speaking of this subject, says :—

"As to intrinsic value, lands thus redeemed are to be ranked with the very best. For some crops, broom-corn and beans for instance, other soils are preferable. But for the standard, substantial crops of Indian corn, potatoes, oats and the different kinds of grasses raised in our valley, experience will show abundantly, that we have no better lands than those thus reclaimed. Having nothing in view but to subdue and improve them as well as possible, he has never been particular to ascertain precisely the quantity of crops raised. Compared with those raised on the alluvial lands adjoining, however, they will in the proper season of crops, speak for themselves and the soil that produces them. In some respects the soil of reclaimed lands has manifestly the advantage. It is naturally richer. Having for its basis clay or hard pan, it retains the manure put upon it much longer. It is as easily cultivated, and excepting those portions of the alluvial which are benefited by freshets, it is, to say the least, as easily kept in good heart."

Covered ditches are now used to a considerable extent, and answer all the purposes of draining admirably, while they may be plowed over and cultivated as are other parts of the land, so that there is no loss of surface and no disfigurement of the fair face of the field.

These drains are constructed of various materials. They will last many years made of brush laid lengthwise in the ditch; but if a gullet is made at the bottom 6 inches square by stoning, and the ditch filled with small stones to within 12 inches of the top of the ground, it will make a ditch that will last a lifetime.

Brush drains may answer the desired purpose, where stones cannot be obtained; yet we question whether it would be best to lay down such works, where permanent drains are required. A field drained with good and permanent covered drains, presents a neat appearance; there are no ridges or gutters, but the entire surface is level and unbroken. A cheap and convenient article may now be had in *draining tile*, which possesses a permanent efficiency and value. It is made of various sizes, with and without bottoms, and some of it perforated on the sides so as to receive the water at whatever point it may flow in upon them.

We have a covered drain across a twelve acre lot, diagonally, made of stones, with a six inch gullet, which has supplied us with *twelve hundred gallons of pure water* every 24 hours through all the late drought. On the ground thus drained, we have just cut, by the estimation of good judges, a crop of herds grass, red top and clover, equal to three tons to the acre, where two years ago about

one ton of meadow grass, skunk cabbage, hardhack and hassock grass grew!

Where stones are plentiful on the farm, they are the material we ought to use in underdraining. If stones cannot be had, draining tile, which can now be obtained at most of our Agricultural warehouses, are far more preferable than wood, and will be found more efficient, as well as more profitable, in the end.

For the New England Farmer.

"INDIGENOUS FRUITS AND SHRUBS"---IMPROVING FRUIT.

Mr. Editor:—I noticed in your last week's paper that one of your correspondents wants "information on the rearing of our indigenous fruit trees and shrubs." I have no doubt that a great deal might be done in the way of improving our native fruits; but is there any necessity of going back to the crab apple, when we have got so *many fine, and perfectly hardy varieties of the apple?* To effect any great change in the character of a fruit is the work of a long lifetime; but this should not deter us, if there is need of it. Van Mons did a great deal towards improving pears; he found that the fifth generation were nearly all of good quality. He selected the seed from some young, healthy seedling tree, and planted; the fruit of most of the first generation proved of inferior quality, but he selected seed from the best, and planted again and so on. Now this would be the way in which your friend might improve the crab spoken of, (*Pyrus coronoria,*) so perhaps with the choke cherry, (*Cerasus Virginiana,*) though we think it would be a waste of time, for the same may be said of cherries that was said of apples; there are so many and good varieties that it would seem hardly profitable to go over the same or nearly the same ground that has already been traversed. It probably would not take so long to improve the cherry as the pear or apple. Do not understand me to say, nor do I think that there is no room for improvement in the fruits I have spoken of; I think there is, though many say we have arrived at perfection in some of the fruits, such as strawberries, raspberries, &c. Allowing that there is nothing to be done towards improving *some* of the fruits, still there is a broad field open before us. We want some good varieties of the gooseberry, those that will flourish in almost any location and yet be free from mildew which so much troubles the English sorts; we have none now that can be depended upon except Houghton's Seedling, and that is quite small compared with the foreign kinds. And then we want some better, and earlier, hardy grape, and whoever succeeds in obtaining just the thing, will, if he chooses, make a handsome sum out of it. I have spent considerable time in this way, and have now a good many seedlings of different fruits, some of which are very promising; I have tried pears, apples, cherries, plums, peaches, grapes, raspberries, gooseberries and others. We shall meet with disappointment, but never mind if we fail once, try again, keep trying.

Your friend speaks of the whortleberry, and says he has been unsuccessful in producing them from the seed; I have never tried them, but think there is no trouble in doing it; the seed should as soon as washed from the pulp, be put into moist loam, or sown, and if the latter is done, they will probably come up early the next spring; if the former, they should be kept through the winter somewhat moist, and planted as soon as the ground will answer; they may not come up the first year; it takes two years for some seeds to vegetate, among which is the mountain ash, but they come well the *second* year.

I think something might be done towards improving the whortleberry, and some other native fruits which have been hitherto neglected. I have not done the subject justice, for want of time, but shall refer to it again. J. F. C. H.

Newton Centre, July 9th.

THE DROUGHT.

It was said by one of old that men would not leave certain habits and practices, even though one from the dead should warn them of their errors. We suppose there are those living at this enlightened day, whose practices in agriculture could not be changed by any amount of evidence, ocular or oracular, that could be adduced. But we ask every man to observe now, for himself, whether, in nearly all lands that have been deeply plowed and highly cultivated, there has not been a heavy crop of grass, or grain, and there is not promise of good crops of corn, potatoes and vegetables. We have been close observers, and certainly such is the case throughout the range of our observation.

Is there any better evidence needed, then, that the true way to manage our land is, to cultivate only so much as we can plow, manure and tend in the most thorough manner, and giving each crop such attention as it requires at any moment!

There has been but one season within our recollection where a fair return could not be had on lands cultivated in this manner. Indeed, there is no surer return for the money and labor invested in any business, than there is to the farmer on such lands as these.

A too great expansion of business with the farmer operates in its results precisely as it does with the mechanic or merchant. A man may remove several ton's weight in a day, and deposit it safely at the desired point; but if he undertakes it at once, he sinks beneath its weight and is buried in the ruins.

For the New England Farmer.

IMPORTANCE OF THE LEAF TO THE PLANT.

Mr. Editor:—Seeing you have appreciated the few extracts that I sent and given them a place in your excellent journal so well suited to the wants of the present day, I think it is the duty of every man at all conversant with the elementary principles of agricultural science to contribute whatever mite of information he has got for the good of his fellow-man. I consider that the man who can make two blades of grass grow where only one grew formerly, is a greater patriot to his country than the blood-stained hero. With these few remarks, I beg leave to give you a few more

straws from the gleanings of the field of practical science.

Such as the wonderful journeys of a particle of carbon. We are too apt to overlook the wonders of things with which we are every day familiar, and which are close to us, but after a little more minute attention and examination, we begin to find out a great many extraordinary powers in objects with which we seemed already familiarly acquainted.

Not the least of these, is the air we breathe. It is certainly one of the most extraordinary substances we are acquainted with, especially that portion of it, the oxygen, that active agent on which depends our very existence, and by which so many substances, by its chemical combination, are produced. I will confine myself to one of the products of the universal agent, the oxygen, by its chemical combination with carbon, one of the simple elements.

Let us look round upon the bright green robe in which the fields and trees are dressed; look round with wonder, for each leaf you see is a part of the Almighty chemist's laboratory, and here, amidst all this beauty, there is going on from early morn to dewy eve, a work of such importance that if it, were discontinued, the whole animal creation would soon cease to exist. Here, in these little laboratories, is applied a mighty force, to which the most powerful galvanic battery cannot be compared, and here is a change effected, which establishments of human power, backed by human ingenuity, has hitherto been unable to accomplish, a change so utterly beyond man's power is effected. Let us look round with joy that so much beauty shrouds the work-shop of the mighty chemist; look round with thankfulness, that so great provision is made for our security and comfort, and while we walk amongst these green leaves, look with reverence, for the hand that works therein, is the Creator's.

Let us now examine this mighty laboratory, this little leaf. Plants are not so much nourished by their roots as many persons suppose; the leaves and the soft green covering of the stem perform a much more important part in supplying the plant with food. Plants grow by the absorption of water and the fixation of carbon; of these substances plants are almost entirely composed, and unless they are supplied, the plant will die. The leaves are the principal agents in the absorption and decomposition of carbonic acid, and the retention of carbon, as a very simple experiment will prove. Take a sprig of any succulent plant and keep it in a dark place till you use it. Fill a tumbler three parts full with water, and with a clean tobacco pipe breathe into it for some minutes; then fill up the glass carefully, without wetting the edges; then drop in the sprig. (The glass should be full, so as to make the water stand above the edges.) A flat piece of paper having been laid on the top and a flat plate above, then turned upside down, and put in the sunshine—you will see globules form upon the leaves of the sprig and rise to the upper end of the inside of the glass; this is pure oxygen gas. The carbonic acid which the water absorbed has undergone decomposition and the oxygen set free.

The nutritious fluids of the plant, like the blood of animals, need exposure to the air before they are fit to take a place in the organism of the plant, or form its tissue, and thus contact with the air is brought about in the leaf, the anatomy of which, in some instances, may be seen without a magnifying glass. If you split a stem down carefully at the point where a leaf is attached, you may be able to detect the stalk of the leaf in connection with the central pith or medulla. A leaf is composed of four layers of tissue, or two layers folded upon themselves. The skin or cuticle of the leaf is composed of compressed or condensed cellular tissue; beneath it, run the vessels which bring the sap up from the root, which coming from the medulla or pith, flows first over the upper surface of the leaf, and then having been turned under towards the stem, deposit new wood within the bark. All the juices of plants are the same till they pass along these vessels in the leaf where they undergo a change. After having been exposed to light and air in the myriads of vessels which run along the leaf, the juice passing downwards on the outside of the stem, deposits woody fibre in its downward course. This is chiefly composed of the carbon which has been taken from the air in the state of carbonic acid by the leaves, which have really much more to do with the nourishment of plants than the roots.

In illustration of this, a bough of a tree round which a plant of woodbine has been tightly bound, will be swelled above the woodbine, not below, proving that the growth of the tree takes place from above, downwards. It may also be proved by a simple experiment with a cord bound tightly round the stem of some rapidly growing tree. It will be found in a short time, the fibres sent down from the leaves will swell the stem above the ligature, while the portion of the stem below, will not have increased in size; never, therefore, should the leaves of plants be taken off, with the idea that they have got more than the roots can nourish, for, on the contrary, the leaves are the support of the plant, where there is a free admission of air. The beautiful green color of leaves depends upon the absorption and decomposition of carbonic acid in their vessels, and what we are breathing out of our lungs to-day, may probably be incorporated with the tissues of a beautiful plant to-morrow; perhaps with some blade of grass; on that grass the cow will feed and again appropriate the carbon by absorbing it into her circulation and forming the butter of milk; and of that butter, whose chief component part was breathed out from the lungs a week before, we may eat, digest, and again breathe out into the atmosphere. The adaptation of such a variety of important changes, so different in their characters and the ends to be fulfilled in such a manner as all to be brought about by one universal agent, and the supplying of this agent to all bodies which require it, by giving it the gaseous form and making it encircle the earth on all sides, may be regarded as one of the most striking instances which can be adduced, of that harmony of adjustment which pervades the works of nature. Yours, &c., M. A Perry.

Watertown, July 1, 1853.

The Swallow.—Will some of our friends in different parts of New England, be kind enough to note the time of departure of the swallows, and let us know.

For the New England Farmer.

ROSE BUGS.

This pest of our gardens is, as usual, making his attacks directly upon the blossoms of our grape vines. Truly "destruction wasteth at noonday." The following contrivance may be found useful. Take a common tunnel; insert a handle from two to three feet long into the spout; then having a slender pointed stick of the same length in your right hand, hold the mouth of the tunnel under the cluster of blossoms upon which the bugs have lit; "stir them up" with your short stick and they will drop into the tunnel. Its steep smooth sides prevent their getting up again. They become entangled with each other, and at convenient intervals you can turn them into a basin of water. The thing is worth trying.

UNION IS STRENGTH.

Mr. Editor—I am a decided convert to the doctrine that farmers, and especially fruit-growers, may accomplish a great deal if they will only unite in a general warfare against their common enemy, the "insects injurious to vegetation." For nearly ten years, I had in my gardens, plum trees of the choicest varieties, but I never was blest with a single ripe specimen of the fruit. Within the last three years I have had specimens upon all my trees; and, I am ashamed to confess, not through any plans or efforts of my own. I think I am reaping the results of the labors of others. All around me I see my neighbors using various means to "destroy the bugs." Cotton around the plum trees, and no doubt other contrivances less visible, must have done something to thin out the destroyers. Let me quote a line or two from Dr. Harris's recent work on "Insects injurious to Vegetation: "Eighty-six of the spoilers (rose-bugs) were known to infest a single rose bud, and were crushed with one grasp of the hand. Suppose, as was probably the case, that one half of them were females, by this destruction eight hundred eggs at least were prevented from becoming matured."

Three days ago my grape vines were almost covered with rose bugs. Twelve hours would have sufficed for the destruction of every cluster of blossoms. By using the instrument described above, (which is far more convenient than a basin of water hot or cold) I have cleared my vines almost entirely. The number of victims is growing less and less and my grapes look finely. "Union is strength." Let each fruit grower guard his own post, and the victory is ours.

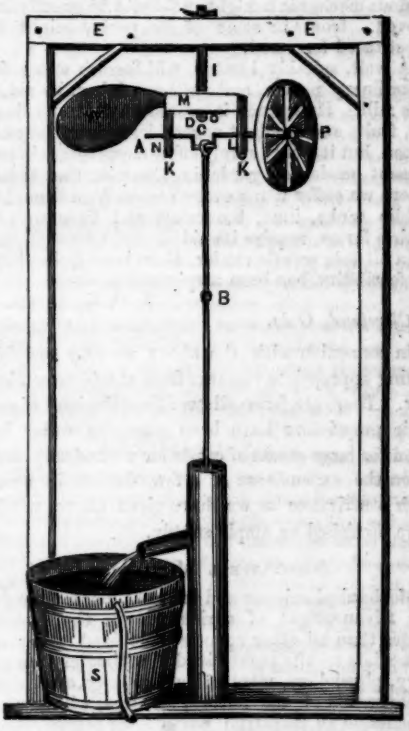
Pepperell.

Remarks.—Capital advice—hope it will not be in vain. "Unite" with us again, friend B.

The Wheel Hoe.—One of the most accurate observers of men and things, and one of the most intelligent of our correspondents, in speaking of this implement, says:—"I think a man will complete three times the work with one of these machines, in the same time, that he can with any other I have seen. They not only thoroughly cut up the weeds but they leave the surface in fine condition for the growth of the plant."

APPLICATION OF WIND AS A POWER FOR RAISING WATER.

To pump from a well the requisite supplies of water, was a work of no small labor. It led to the investigation of a method of working a pump by means of the wind. The practicability of the plan I am about to suggest, does not remain to be tested by experiment. During former years, a small wind-mill was in successful operation upon the farm of Mr. Anderson, five miles west of Ashland, Ohio, on the road leading to Mansfield. It worked a pump that amply furnished a large stock of cattle, which otherwise could obtain no water. Two days only did it cease to perform its duties during more than two years, and that interruption was occasioned by the meddling of mischievous boys. It is still in operation for aught I know. The cost of this simple machine, including pump, did not exceed fifteen dollars.



By reference to Plate, the principles upon which it was constructed will be at once comprehended. The direct application of the power, without the intervention of any gearing or machinery, obviates much friction, hence a small amount only of power is required. The diameter of the wheel should not exceed four feet, a few inches less is preferable. It is firmly fixed by its hub on an iron axle formed of a square inch bar. The sails or buckets are secured at their outer ends to a wooden rim, like that of a large spinning wheel. An inch and a half crank is raised on the axle at C, which, at that point, is cylindrical, and upon which is adjusted the upper ends of the piston rod of the pump B. This, when in motion, of course commands a play of three inches.

The Body of the Mill.—A piece of pine plank, M, is suspended from the cross-girt of a frame, E, by an iron bolt, I, furnished at its lower end with a large head, and a washer, and secured by a key, at the upper end, admitting of an easy circular motion of M, around the bolt. This motion is coincident with that of a swivel on the piston-rod. The rudder, or vane, will necessarily throw the wheel at all times into the wind. The axle, A, is suspended from the body by two straps of iron, through which it passes at L, N, where it is cylindrical without regard to perspective and proportion, but will perhaps illustrate the subject sufficiently.

A breeze which merely agitates the leaves of the trees will set the machinery in operation. A reservoir of some six or eight hogshead was kept nearly filled, and when, in windy weather, a surplus of water was raised, it was returned to the well by a waste-pipe. In the hands of an ingenious mechanic it might, no doubt, be greatly improved. Iron, in some of its parts, might be substituted for wood.

A well, suitably located, will furnish water for an ordinary garden, and without labor, by aid of this mill. How much it would improve our flowers, fruits and esculent vegetables, cannot be estimated, but it would surely effect a revolution in our present modes of gardening here in the West, where we suffer much every season from drought. Public tanks, inns, tanneries, and thousands of prairie farms, require its aid.

In all this, gentle reader, there is no Quixotism. Its feasibility has been amply tested.

J. P. KIRTLAND.

Cleveland, Ohio.

In connexion with the above we copy the following appropriate remarks from the *Genesee Farmer*. There are farms all over New England where their proprietors have been pumping water by hand for large stocks of cattle for a hundred years, when the expenditure of a few dollars in some such contrivance as we have given above, would have furnished an ample supply.

AGRICULTURAL MECHANICS.

Mechanical science and arts are doing more for the advancement of agriculture in the United States than all other agencies combined, so far as immediate results are attained. Ultimately, chemistry, physiology, meteorology, geology, and other departments of the natural sciences, will confer benefits on all industrial pursuits far transcending any mere mechanical advantages. Indeed, the most valuable mechanical powers, even now, are more the fruits of an intellectual culture than of original genius; and the successful study of natural phenomena precedes nearly all important inventions and discoveries. Operations that have been practiced thousands of years, like those of plowing, weaving, grinding grain, and pumping or lifting water by wind, are seen from an entirely new point of view by the man of science; and he is able to suggest improvements that never could have occurred to a mind not illuminated by the numerous and brilliant lights kindled by modern researches into the laws of matter.

We have been led into this train of thought and remark by perusing in the *Horticulturist*, the valuable article on the "Application of Wind as a Power for Raising Water," from the pen of Prof. KIRTLAND, of Cleveland, to which the reader's attention is invited in this number. By keeping the wheel always in the direct current, if it had any force, the flanges would catch it, and turn the wheel, as a current water-wheel is turned. Such a wheel with the necessary shaft and crank may be made of iron for a few dollars; and every one can understand from the illustration furnished by Prof. KIRTLAND, that this simple apparatus will work successfully whenever the atmosphere has any active motion. These current wheels (they are in no sense *mills*) and pumps, if manufactured in a large way, might be sold at prices which would enable every farmer to have a score of them for irrigation, and for the distribution of liquified manure, if he saw fit to make the mechanical power of the winds create wealth for himself and mankind.

With durable and cheap machinery, vast quantities of water may be elevated to any desirable height on every farm, for agricultural purposes; and the thanks of the farming community are due to Prof. KIRTLAND for his very intelligible illustration of a simple and useful wheel and crank to be put in motion by wind. The water that falls upon every square foot of ground in a field is equal, on an average, in this country, to 200 lbs. a year; and so much of this as descends deep into the earth and reappears in wells and springs, always contains both the vegetable and mineral food of plants (dissolved out of the soil in passing through it) in greater or smaller quantities. In rare instances such water is poisoned by an excess of acids, or acid salts.—*Genesee Farmer.*

For the New England Farmer.

MUCK.

I like to see the farmer returning home from his day's toil, with his team loaded with muck or rich sod. It gives almost sure evidence of thrift. Yet there are some people who become muck-mad. They seem to hold the highway, as both private and public property, in a manner that I am unwilling to acknowledge their claim. The highway is public, so far as the unobstructed right of pass-way is concerned, and private, to the extent that one may set out fruit or shade trees, or plant potatoes against his premises, provided he does not encumber the public travel. These muck-mongers do not stop here. They go about plowing up the highway, and digging their pitfalls not only against their own farms, but their neighbors.

For the New England Farmer.

THE NEW INSECT.

MR. BROWN:—We are visited here by a multitude of canker worms, and they are destroying our fruit at a great rate; we think the trees will suffer for the want of leaves. The course I have taken to drive them away is to throw sand through the tops of the trees with a shovel, when they will come down like a shower. This should be done a number of times, and I think will prove beneficial. To prevent their going back, I have wound a piece of birch around the tree and covered it with a compound made of tar, lamp-oil and spirits of turpentine, and they will not pass over it.

York County, Me. E. M.

For the New England Farmer.

NEW YORK STATE AGRICULTURAL COLLEGE.

Mr. Brown :—I have just received a pamphlet containing the Charter, Ordinances, &c., of the New York State Agricultural College, from which I learn that the Legislature of the State incorporated the Institution in April, 1853, and that an organization has been effected under the Act, by the choice of John Delafield, President; John A. King, Chairman of the Board of Trustees; Joel W. Bacon, Secretary of the Board; and N. B. Kidder, Treasurer.

The Charter is quite brief, simply giving the common rights and privileges incident to corporations; prescribing that at least three hundred acres of land shall belong and be attached, to the College; that the plan of instruction shall embrace—practical and scientific agriculture, chemistry, mathematics and mechanics, surveying and engineering, geology and botany, the practical management of the farm, of the dairy, of the various kinds of live stock; also, such other branches of knowledge as may be deemed useful and proper. The capital stock is fixed by the corporation at sixty thousand dollars, divided in shares of fifty dollars each; and liberty is given to increase the stock from time to time, as the Trustees may judge advantageous and proper. The corporation is to become active for the primary purpose designed, when forty thousand dollars shall have been subscribed, and fifty per cent. on each share subscribed for shall have been paid in. The College is to be endowed and put in operation by private individual enterprise and liberality. The Trustees have accordingly adopted measures which will lay the subject before the farmers and others at once; and a private letter from the President informs me that they have already been encouraged by liberal unsolicited subscriptions to the stock.

The corporation declare their chief object to be, "to provide a system of instruction essential and practically useful to the agricultural interests of the State—at once combining theory with practice, affording wholesome discipline to the mind, an accumulation of knowledge, and promoting habits of labor and industry." To this end, a farm of not less than three hundred acres of varied soil is to be connected with the college, and to be managed with a view to the results of a mixed husbandry. The college year is to be divided into two sessions. The first session, commencing the first of April, and ending the first of October, is to be mainly occupied in the conduct of the field operations, interspersed with instruction relative thereto, thus affording the students a practical knowledge of the various departments of the farm. The second session, commencing the first of November, and ending the first of March, is to be principally devoted to study and attendance upon courses of lectures, particularly and elaborately illustrating the various subjects and sciences bearing upon agricultural pursuits. The plan for lectures marked out by the officers, is very full and complete, leaving no subject of direct importance to the farmer untouched. The course of instruction for each student is to continue for three consecutive years, at the expiration of which, and upon the recommendation of the President and Professors, the Trustees will confer diplomas.

Each candidate for admission into the College, must be able to read and write the English language well and have a good knowledge of the ground rules of arithmetic—must be at least sixteen years of age, and give evidence of good moral character.

For the present, the charge for instruction, with board and lodging, lights, fuel and washing, is fixed at three hundred dollars per annum, payable, one-half at the commencement of the first, and one-half at the commencement of the second session; but the Trustees intend to lessen the cost of instruction, and make the distribution of knowledge as free as possible, as fast as endowments or State patronage shall permit.

Judicious rules of discipline are adopted, the enforcement of which will be calculated to promote industrious and virtuous habits.

For one, I feel under great obligations to the enterprising agriculturists of New York, who, by their persevering labors, amid much contumely, have at length succeeded in giving life and tangible shape to an Agricultural Institution, now actually on the eve of commencing a practical, well-defined course of instruction, where the young farmer may gain information in principles of great importance to a proper and the most successful prosecution of farming affairs, may have his mind so expanded, refined and disciplined, as to render succeeding life more agreeable and desirable, because the avenues for pleasurable emotions have been greatly opened and increased.—more influential and beneficial, because the informed and disciplined mind is an engine of power and strength, always fit for valuable service as occasion may demand. I trust that this Institution will greatly flourish, and that other communities, observing its good fruits, will be influenced to the establishment of like advantages for the training of young men.

Believe me, my friend, we have had quite enough of speculation upon the possible and probable advantages of educating the young farmer; every needed argument has been stated, in every variety of form and connection; and now the great want is action, *practical action*. Public and desultory discussion can do but very little, if any more good; earnest individual effort must develope system, and set it in active practical operation. Those of us here in New England, who believe it would not hurt our farming youth to be better educated, in our endeavors to provide the necessary facilities for their instruction, must not look too high for aid, or expect to bring it from afar; we must seek, and shall find it among our enterprising liberal private citizens. Legislative bodies will probably grant us the chartered right, and privileges incident to incorporated schools of learning, but further they will not, at present, aid us. Seldom leading in new and untried plans of improvement, they more generally reflect the views of that large or major portion of the public who are content with customs long practised, and fear or despise, rather than profoundly investigate and reason upon, those plans of action which lead out of, or beyond the beaten paths. An Institution for the instruction of young men in agricultural and rural affairs, would be quite an innovation upon old ways: and for a time at least, would doubtless be subject to much contempt and ridicule, from persons of

shallow ideas as to the amount of education which may desirably find employment in the conduct of such affairs. It therefore needs for its establishment and its practical working, a class of men, hopeful and courageous because they have clear, comprehensive and well defined views of what can be beneficially done in the way of agricultural education —men who, understanding the exact condition, difficulties and wants of New England farmers and farming, can devise, and select suitable agents to dispense, a course of instruction for our farming youth, justly combining theory and practice, and actually fitting them for the proper and most profitable cultivation of the earth, with the incidental, but vastly important advantage of preparing them, by the mental training attendant thereon, for a more intelligent and useful discharge of duties as republican citizens.

I know of no association of men more favorably circumstanced for giving life and an active practical usefulness to an Agricultural College, than your Massachusetts Board of Agriculture. It is composed of persons of large and long experience in practical affairs, of persons of ripe scholarship and thorough experience in the management of seminaries of learning, and all entertaining liberal views of men and things. You are located in a State containing many wealthy citizens, frequent in noble acts of munificence. One of your citizens, resident in Boston, told me not two years ago, that he would give the necessary land, located wherever in the State might be judged best, to a corporation duly chartered and organized for the education of young men for farming. What, if not the establishment of a justly proportioned Agricultural Institution, is a fit achievement for your Board? I venture, my friend, to express to you, a member of this Board, a hope, and indeed expectation, that it will not let its great energies and influence lie in dormancy, regarding this matter, or play, upon the surface of it by mere discussions, but will use them actively, practically, in the production of something which we can see, feel and possess. Allow me to ask if it would not be well to ascertain what can be done by way of private subscriptions to the capital stock, and of individual endowments of such an Institution. You can probably obtain a charter from the Legislature, and not much more at the outset. Aim not too high at the beginning, but make your course of instruction more and more full and complete, as experience and increasing funds shall dictate; and from first to last, make it such as shall be practically beneficial. The condition of most of us farmers, so far as the affairs of this life are concerned, is one requiring primarily, a practical fitness for the intelligent discharge of a round of daily, and more or less homely, but still manly, duties; and with this substantial ground-work well laid, we may well add thereto all the acquirements and accomplishments we can find time for—the more the better. It cannot need more than a few words to say, that these remarks are not made in a criticising, or fault-finding, meddlesome spirit, but spring from feelings of friendship and good will, and a desire for the promotion of agricultural improvement.

F. Holbrook.

Brattleboro', June 20, 1853.

White Weed.—Capt. Daniel Trefethen of this town, assures us that he has discovered a method for killing effectually, this plague of a "farmer's life." He says that the present season, he had a field, which was literally covered with the blossoms of the white weed so called, and having a small quantity of salt on hand, the thought suggested itself to him, that possibly some benefit might accrue to the field from the distribution of it upon the surface. The act was "father to the thought." He scattered the salt over the field, and in a short time the blossoms all withered, and upon examination the roots were found to be entirely lifeless. This is certainly a valuable remedy for the eradication of this detestable weed, providing the experiment prove as effectual in all cases, as in this. At all events, we would recommend to those farmers who are troubled with this species of weed—to try it.—*Dover Gazette.*

For the New England Farmer.

COWS AND TAR.

Mr. Editor:—You are aware, perhaps, that many good cows are sometimes troubled with the *garget*, or they give curdled milk. Sometimes it injures the bag by preventting the drawing of the milk. The best remedy that I ever tried is to cut the hair out of the hollows just back of the horns, and fill with tar. It is simple, cheap and easy; try it, and if it is worth any thing let it be known; or if any one knows anything better, I hope he will publish it.

Ichabod Davis.

East Barnard, Vt.

Remarks.—Yes, sir, we are aware that *a great many cows* are troubled with what is called garget. The udder swells, is filled with bunches, becomes sore to the touch, and sometimes breaks and destroys the value of the cow for milking purposes. It is a very serious evil to the dairyman, as well as to the poor animals. No remedy has yet been found for it, hardly worthy the name, unless you have made the discovery.

This disease, and abortion, which has become very frequent, are the most serious difficulties with which the farmer has to contend with his cows. We really wish some person who has the leisure and ability would search out their causes and suggest a cure. Who will do so?

EFFECTS OF DEEP PLOWING.

The *Farmer and Mechanic*, published at Lewiston Falls, Maine, one of the liveliest and best papers we receive, says:—"A gentleman in Canton took us out the other day on to two acres of land which he had cultivated for a few years, and which he makes very productive. He told us that it was so wet when he commenced upon it that he could do but little with it; but some three or four years ago he put in a large plow, and turned it over to the depth of nearly one foot, following with the subsoil plow to the depth of nearly one foot more. Since then he has had no trouble with the wet or the drought. Every thing he puts upon it flourishes finely. This process will pay on much of our land, whether the undermining will or not."

For the New England Farmer.

A RARE AND PLEASANT BOOK.

Mr. Editor:—I found, not long since, among some old books in this village, a treatise on Fruit Growing and Gardening, which interested me so much, that I could not deny myself the pleasure of sending a description of it to yourself.

It is an octavo in form, and divided into two sections. The title page to the first part has been torn out, but the title over Chapter I, is "The Best, Svre and Readiest vay to make a Good Orchard and Garden." The date of course is gone with the title page, but that of the second part, which is probably the same, as the pages are continuous, is 1631. The title to this, "The Covntry Hovse Vife's Garden, containing rules for herbs and seeds of common use, with their times and seasons, when to set and sow them. Together with the Husbandry of Bees, published with secrets very necessary for euery housewife. Also diuerse new Knots for Gardens. London. Printed by Nicholas Okes for Iohn Harrison, at the golden Vnicorne in Pater-noster Row, 1631."

It is not merely the antiquity of the book which pleases, though I must confess to the weakness, if weakness it be, of possessing a very tender regard for old things, among which old friends, old books, and old wine are especially valuable—but as I remarked, it is not merely this which makes the book valuable; but the writer (I wish we had his name) is *brimfull* of love for his subject. He loved trees as men love their children, and as you follow him, his simple, quaint style, and his earnest sincerity win you at once. You feel sure that he wrote, not to make a book, but because he *couldn't help it*. There are seventy-four pages upon "Making a Good Orchard," and many of the hints might be safely followed by our modern gardeners. He has inserted two or three sketches of trees, forms for a garden, &c., of which he says, "I have shadowed out these for the better capacity of those that are led more with the eye than the mind, craving pardon for the deformity, because I am nothing skilful either in painting or causing." He has seventeen chapters each of them short and to the point.

He gives minute directions for "Grafting" "Incising," "Packing on," &c. Let me copy his remarks upon the "Age of Trees," which will give you some idea of the old gentleman's style, and if you like it not, I will send you no more, but if it please your readers, I will add another chapter at a future time.

"All this treatise of trees tends to this end, that men may love and plant orchards, whereunto there cannot be a better inducement than that they know or at least be persuaded that all that benefit they shall reape thereby, whether of pleasure or profit, shall not be for a moneth, or one or many, (but many hundreth) yeeres. Of good things the greatest and most durable is alwaies the best.

"If, therefore, out of reason grounded upon experience it be made (I think) manifest, but I am sure probable, that a fruit tree in such a soile and site, as is described, so planted and trimmed and kept, as is before appointed and duly foiled, shall dure 1000 yeares, why should we not take pains and be at two or three yeers charges, (for under seven yeeres will an orchard be perfected for the first planting, and in that time be brought to fruit) to reape such a commodity and so long lasting.

"Let no man think this to be strange, but peruse and consider the reason. I have apple trees standing in my little orchard, which I have knowne these forty yeeres, whose age before my time, I cannot learne, it is beyond memory tho I have enquired of divers aged men of 80 yeers and upwards; these trees although come into my possession very evil ordered, misshapen, and one of them wounded to the heart, and that deadly (for I know it will be his death) with a wound wherein I might have set my foot in the heart of his bulk (now it is lesse) notwithstanding, with that small regard, they have had since, they so like, that I assure myself they are not come to their growth by more than two parts of three which I discerne not only by their owne growth, but also by comparing them with the bulk of other trees.

"And I find them short (at least) by so many parts in bigness, although I know those other fruit trees to have beene much hindered in their stature by evill guiding. Here thence I gather thus.

"If my trees be a hundred yeers old, and yet want two hundred of their growth before they leave increasing, which make three hundred, then we must needs resolve, that this three hundred yeere are but the third part of a tree's life, because (as all things living besides) so trees must have allowed them for their increase one-third, another third for their stand, and a third part also for their decay. All which time of a tree amounts to 900 yeers, three hundred for increase, three hundred for stand, and three hundred for his decay.

"But every living thing bestows the least part of his age in his growth, and so must it needs be with trees. A man comes not to his full growth and strength before thirty yeers, and some slender and cleane bodies, not till forty, so long also stands his strength, and so long also must he have allowed in course of nature for decay.

"Ever supposing that he be well kept with necessaries, and from and without straines, bruises and all other dominyring diseases, I will not say upon true report, that physicke holds it possible, that a cleane body kept by these 3 doctors—Dr. Diet, Dr. Quiet and Dr. Merriman may live neere, a hundred yeeres. Neither will I here urge the long yeeres of Methushalah, and those men of that time, because you will say man's days are shortened since the flood. But what hath shortened them? God for man's sinnes; but *by meanes*, as want of knowledge, evill government, ryot, gluttony, drunkennesse, and to be short on increase of the curse, our sins increasing in an iron and wicked age.

"The testimony of Cicero in his booke De Senecutte, is weighty to the purpose; that we must *in posteras actates ferere arbores*, which can have no other sence than that our fruit trees of which he speakes can endure for ages.

"What else are trees in comparison with the earth; but as haires to the body of a man?—Haires endure long, and are an ornament and use also to the body; as trees to the earth.

"So that I resolve upon good reason that fruit trees well ordered may live and like a thousand yeeres, and beare fruit, and the longer the more, the greater and better, because his vigor is proud and stronger when his yeers are many.

"You shall see old trees put their buds and blossoms both sooner and more plentiful than young

trees by much. And I sensibly perceive my young trees to enlarge their fruit as they grow greater, both for number and greatness.

"It is good for some purposes to regard the age of your fruit trees, which you may easily know, till they come to accomplish twenty yeeres, by his knots. Reckon from his root up an arme, and so to his top twig, and every yeeres growth is distinguished from others by a knot, except lopping or removing doe hinder."

We think the worthy writer somewhat enthusiastic in his calculations—and fancy he would believe as implicitly in the seven cedars of Lebanon, as Lamartine himself. But there is such a love for trees manifested throughout his little work, that one easily forgives his enthusiasm, and as we travel back two hundred years, we fancy the honest, kind-hearted Yorkshire man living himself almost to the age of Parr, and sitting under his own vines and apple trees. One of his concluding sentences is as follows:

"What shall I say! A thousand pleasant delightes are attendant in an orchard; and sooner shall I be weary, than I can reckon the least part of that pleasure, which one that hath and loves an orchard may find therein."

Remarks.—The above pleasant article is from a lady. It has remained longer in "our pigeonhole" than it ought, and longer, we promise, than the *next one* shall, after we get it. There is a beautiful earnestness in *her* remarks, as well as in the text she speaks from; and we really believe they would excite us a little even if they were not from the hand of a lady! We wish we could hand our correspondent an old volume entitled "Markham's Farewell to Husbandry," some idea of the quaintness and beauty of which she may get by referring to the volume of the *Farmer* for 1852, page 243. But it was a borrowed gem, long ago returned to its owner in Connecticut, so that we cannot please her or gratify ourselves by so doing.

For the New England Farmer.

FRONT-YARD FENCES—ALDERS.

Mr. Editor:—Your correspondent "S. G. B." inquires the best way to build a front-yard fence. I would advise him to set stone posts in holes two and one-half feet in depth, and the same in diameter, and to fill the space around them with small stones well packed down with a crow-bar and nothing else; and then drill two holes in the face of the stone about 4 inches deep, but not very large, with a space of 3 feet between the holes for the purpose of securing the joist on which the pickets are to be nailed. Take some large bolts, (square) and put them through the joist and drive them securely into the stone holes. The joist should be about 3½ by 5 inches, or thereabouts. Pickets 4 feet long and 3 inches wide, with the same space between, and then draw a line on the top of them and saw them true, and then you want a rave on the top with a groove in its under side, in width the thickness of the pickets; and that laid on the top, nailed occasionally, makes the whole firm and strong.

The best time to cut alders is in June, and the best way is by having one to pull the tops over, while another cuts them up; but if they are very large cut them down snug to the ground, and when sufficiently dry, pile and burn them on the ground. It is of no use to cut them only in the summer thinking to kill them; such is my experience. In the future I may ask a few questions.

W. N. S.

Kensington, N. H., 1853.

For the New England Farmer.

PLEASANT WORDS FROM "DOWN EAST."

Mr. Editor:—I imported six bushels of seed oats and two bushels of barley last fall from Scotland, which I sowed this spring, and for the information of those who may have an idea of importing seed from the old country or elsewhere, I purpose giving you some statements connected therewith. There is a prevalent idea that oats or other grain from the mother country never do well here the first season, but judging from the present appearance of mine, I am inclined to believe that if the seed be good, and is properly taken care of, and gets a fair chance, it will do as well the first year as it will the second. They have now fairly commenced to grow, both the oats and barley, and I have no doubt but they will turn out well. The oats are the early kind. They were raised near Forfar by one of the best farmers in that county. They are as clean and pure as any oats I ever remember having seen; the barley also is very pure and clean. They were sent out last fall and lay all winter at St. Johns. When they came to hand this spring, I found they had been very carefully done up in two barrels, which had been well smoked or fumigated, and made perfectly tight, so that the grain smelt as fresh as when it had been put in. They were shipped at Dundee, and the freight to St. Johns was 3s., the duty 1s. 6d., entries 9d., cartage 1s. 3d., (I was charged nothing for storage,) so that the freight and charges, exclusive of inland cartage amounted to 6s. 6d.

The soil and climate of this province is well adapted for oats, and I think it would be well for the country if their cultivation received more attention. Oats in a general way are raised for horse feed, and little pains is taken to improve them in quality; the seed is seldom changed, and is often of inferior description, being light and mixed with foul seed and other grain. If the farmer is asked why he does not sow better and cleaner oats, he will say, "O its no use being very particular with *them*, I can get just as good a price for poor oats as I can for the best." Oats ought never to be sowed more than twice or three times without being changed. The seed should always be the best—well cleansed, and free from other grain so that it might be fit for being made into oat-meal for family use. Good oat-meal when properly cooked, is quite palatable, and ought to be used in every family; as an article of diet, it is one of the most wholesome aliments that can be set on the table. I shall venture to assert that if the people in this country, generally, were to use more oat-meal and less superfine flour, that sickness and consumption would be much less prevalent in it.

I should like to inquire of you, or any of your

correspondents, something about the harvesting and management of seed clover. It has been tried here on a small scale, and the seed is found to be of a very superior quality, but the greatest difficulty seems to be in getting it thrashed and cleansed —some information therefore on that subject would be very acceptable in this quarter.

In reference to the remarks which you made on my previous communication, I must observe that you gave us quite a compliment. My inference is that you seem to be quite satisfied respecting the abilities of our soil, and the superiority of her productions, but that you would like to know something respecting the quality of our men and women. I shall endeavor to gratify your curiosity a little in that particular, but you must excuse me if I do not notice anything about the smartness of our own sex; suffice it, to give a word or two about the other. I think, sir, if you were to come through here and see our *lasses* at work about the farm, you would say that they are better stuff than your New England girls. They can plant a bushel of potatoes a day, (in good shape,) dig 25, top an acre of timothy, and reap 24 dozen oats. They can pitch hay, pick stones, pile brush, rake round the stumps, team a horse, and milk the cows. They can wash and dress, and bake and brew, and knit and sew, card, spin and cook, and clean in style, and catch the horse that beat the boys, and drive the sheep to pasture. The girls are very scarce here, people come a long way after them for wives. J. T.

Harvey, N. B., via Calais, Me.
June 8th, 1853.

Remarks.—Thank you, "John Taylor." Where persons make a business of raising clover-seed, they have a machine, moved by horse power, which they take into the field and gather the clover heads merely, leaving the stubble on the ground. These heads are generally on the "rowen," or second crop. After being gathered, they are threshed and cleaned up much as other seeds are.

Your account of the ladies in "the Harvey Settlement," smacks of olden times. As a wife, we don't want one, having *the best* in "the States" already—but as "a help," gracious, how things would shine at River Cottage, if we had one of your girls! But then, should we feel safe? "Team a horse! top an acre of timothy! reap 24 dozen of oats!" and probably *bind* 24 men if they were to steal a kiss unfairly, from one of these Amazons!

But we are glad to hear from them, and may make more particular inquiries, in person, some future day.

Special Manure for Grapes.—The wine committee, at the exhibition of the Cincinnati Horticultural Society, reported that of two specimens of wine, one from grapes to which a special manuring of potash had been given, the wine from the manure grapes was "bright, clear, and mellow, like an old wine." The other was declared to be less matured in all its qualities, nor was it clear. The grapes themselves, from the two portions of ground, were also presented to the committee. "Both were delicious and well ripened, but it was considered that those from the manured land were sweeter, and that the pulp was softer."

For the New England Farmer.

INDIGENOUS FRUITS AND SHRUBS.

Mr. Brown:—I desire information on the rearing of our indigenous fruit trees and shrubs from seed. All our cultivated varieties of fruit have sprung from wild types, generally of little value. Careful culture, and successive reproduction from seed, have greatly increased their size, and improved their flavor. Our wild fruits are equally promising. Their size and flavor are quite equal, and in many instances superior, I believe, to exotics of the same genus. Besides, by their hardiness or other peculiarities, they are perfectly adapted to our climate.

The sweet scented crab-apple, (Pyrus coronoria) figured in the March number of the *Farmer*, doubtless might be ameliorated, and become a splendid fruit, possessing many valuable characteristics. The choke cherry (C. Virginia of Gray) differ wonderfully in their varieties in size, and flavor; and I have seen varieties of each growing about the fields, which almost equalled the May Duke in size. I might go on, but these will suffice for examples. It may be objected that the ameliorating process is the work of an age,—very true; but we are enjoying the fruit of our ancestors' labor. Let us repay to posterity. However the time requisite for the amelioration of many fruits, is perhaps less than is generally believed. My experience is that the *Amygdaleæ*, or almond family, will fruit in four years from gathering the stones; the bramble in three years, and the grape in four to five. I have been unsuccessful in producing the *Vaccinicæ* or whortleberry family from the seed. Perhaps yourself or correspondents can instruct me. I find no information on the subject in the books. J. Griffiths.

Remarks.—Perhaps Mr. Hyde, of Newton Centre, can throw light on the subject.

ERGOT IN GRAIN.

Some time since, while looking over the files of the *National Intelligencer*, our attention was arrested by a communication from a Parisian correspondent, in which were detailed some of the proceedings of the Academy of Science, the celebrity of which is too well and generally known to require any remark. The writer, evidently himself a man of science, says:—

"A paper was received from Mr. Valot, of Dixon, on the larvæ of various insects destructive to plants, such as the *coneineth masculata*, *cimex circulux*, &c., and on the existence of ergot as a disease peculiar to rye, but Mr. Valot announces that he has seen the same disease in barley. After the reading of this paper M. A. Jussica said that he had recently seen several ears of wheat which had been attacked by the ergot, and that the disease in rye had made great ravages."

We are not aware that the disease called "*ergot*" has ever been really destructive in this country.

Yet it is well known that grain is frequently attacked by insects in the bin, and not unfrequently ruined by them. We have seen wheat, rye and barley, thus injured. When our national legislators, in the plenitude of their wisdom and patriotic liberality, shall allow national support, and endow a college for the promotion of agricultural science, the labors of the entomological department will no doubt throw some light upon this interesting and important study. Simple individual effort can scarcely be effectual in so extended a work.

For the New England Farmer.

MAKING BUTTER.

Messrs. Editors:—It is somewhat singular that such different results should be produced by two persons in the operation of churning;—one person operating in your house, and the other in your next neighbor's. They are as different as the rose and the poke weed in odor, and in taste no more alike than sherry wine and castor oil. Is all this difference owing to the house, or is it in the churn, the woman or the cow? There is no luxury produced in the tropics that is a more agreeable addition to the substantials of the table than good butter; and carrion is not much more disgusting than a great portion of the grease that is marketed in the metropolis of our State under the *name* of butter.

This, however, is foreign to the purpose which I have in hand, and for which I have taken my pen. This is not to write upon the qualities of butter, or to give directions for making a good article My object is rather to make inquiries than to give a lesson, and my aim is toward the *principle* upon which the article is made, rather than the *mode* of making it. I have often thought it rather strange that a man so thoroughly scientific, and at the same time so practical, as Chaptal, who devoted a chapter of his excellent and instructive work on Agricultural Chemistry to the subject of butter, should have omitted to inform us how it is produced. Perhaps there is not a butter-maker in this Bay State, though we have a very conceited opinion of our superior knowledge, that can answer the question involved in the four closing words of the last sentence, simple as it seems. By answering, I mean, of course, giving a satisfactory explanation. Is the oily part of the milk, which constitutes the article called butter, separated from the lime, serum, &c., by mechanical force, chemical affinity, temperature, or fermentation? At first sight many readers will exclaim that it is a useless, nonsensical question, and they don't care to know. A sad error. This knowledge is not only satisfactory, as *all* knowledge is in itself, but it is practical and useful. If known, it may afford a clue to the true mode of making it, so as to be produced by less labor, and also of a superior quality:—and will direct us to the true desideratum in making the best churn, if churn must be used, or in finding a substitute for that machine, that will do the work more easily, speedily, or perfectly. It is well known that butter cannot be produced if the cream is at too high a temperature. The proper degree of heat is said to be 48, or that of the well or cellar in summer. The operation of the churn seems to be founded on the idea that the separation is mechanical, and that the cohesion of the oily particles with the lime is so slight, that repeated and continued blows with a dasher or stick will completely effect this separation through the entire mass. But if it *may* be produced by mechanical force of beating, it is certain that it *may* be produced, also, without that means, as is proved by the fact I shall relate. In my boyhood, about forty-five years since, my mother kept a single cow, to supply her family with milk. The household being pretty numerous and several children, she usually found a full demand for the milk:—but having several times collected a redundance of cream, and having no churn, she tied her cream in her thick pudding bag, and buried it in the ground twelve or eighteen inches, (if I remember aright,) and in the morning took out most excellent butter, into which the cream had been changed. Now there is no mechanical process in this conversion. And the question is, did the temperature alone effect it, or was it assisted by chemical affinity, or by fermentation. Air produces fermentation:—so does water. And there is opportunity for the admission of air, either by the proceeding above related, or by churning. The oxygen or hydrogen of the air might also have the effect of separating the lime from the oily part of the milk, by mere chemical affinity, without fermentation. And this, I am inclined to think, is the true process in the production of butter, which is easier at a particular degree of temperature, because, the cohesive power of the oil and lime is feebler at that, than at a higher temperature. In churning, not much air is admitted into the churn, but the most is made of a small quantity, by stirring it so that it comes in contact with every portion of the cream. Now if I have named the true principle of butter making, it will afford a light which will serve to guide our wives in this part of their rural industry, and the ingenious may make an application of it that may be serviceable in the keeping or conversion of the cream, or in the construction of the churn.

I think, that an explanation in full of the secret of the production of butter by a scientific and practical chemist, with detailed statements of the experiments by which he has attained his results, would be an interesting paper for your columns. There is nothing more interesting or more beautiful than the application of science and of useful knowledge to common things.

You mentioned in one of your late numbers that a gentleman of Brussels had recently found a way of separating the cream from the milk more speedily and perfectly, by mixing a solution of carbonate of soda, and other matters. This, I think, confirms my idea that the separation is effected by chemical affinity, and affords ground for the inference that the farther separation of the other matters from the butter may be produced by the mixture of the same or some other substances. It may be the carbon of the atmosphere which produces the separation, by its affinity for the other matters of the milk and cream, stronger than that of the oily matter.

Some of your readers will say, perhaps, as before intimated, that all this is of no use. Those who make good butter are content to know how to make it, and don't care to inquire into the ra-

tionale. And those who make bad butter are not the kind who are disposed to seek knowledge. While many people think all knowledge useless, and others talk about *useful* knowledge, in distinction from that which is useless, I am one of a third class who think *all* knowledge useful. But I think especially that the knowledge of the principle of the production of an article of so much prominence in our system of dietetics, composing a part of the table of every family through every season, may be well considered in the class of useful knowledge, if there be any that is useless.

W. J. A. B.

Essex, Dec., 1852.

For the New England Farmer.

HORTICULTURAL EXHIBITION AT CONCORD.

The first exhibition of fruits, flowers and vegetables, under the auspices of the Concord Farmers' Club, was held in the Court House in this town, on Saturday, June 18. The contributions were abundant, and the flowers choice, rare, and various beyond expectation. The season was too early for a great display of vegetables, but the turnip-rooted beets, and summer squashes, exhibited by Judge Hoar, were very large and fine, and the strawberries superb.

The contributions of wild flowers were abundant. Among them we noticed the superb Laurel, the delicate and fragrant Linnaea, the charming Eglantine, the spotted Geranium, Irises, the graceful verticillate Lupin, and many others.

Among the roses, we noticed that finest of all yellow roses, the yellow Persian, the yellow Harrison, with its sweet-briar odor, the White English tree rose, one of the finest and most vigorous roses, and, after a long season of neglect, coming rapidly into favor again; the Black Tuscany, very dark; that finest of all white roses, Madame Hardy, Red Moss, White do., of which latter, Mr. Wheildon showed one cluster containing thirteen buds; that finest of all perpetuals, La Reine, Louis Philippe, Rivers, Madame Laffay, Lady Fordwick, Charles Duval, Marquis Bocella, Paul Perras, very large.

Among the climbers, we noticed the superb Prairie Queen, Baltimore Belle, Eva Corinne, and others. Of the tender roses, the Multiflora, Laura Davoust, very beautiful; Madame Plantice, White China, and the Yellow Noisette.

The weather had been hot and dry for several days, so as to injure considerably the beauty of the roses, but the display by Mrs. R. W. Emerson, was very fine, in great variety and the finest in the room. A fine Pittosporam from David Loring, and a superb Cactus Speciocissima, from Miss Thoreau, added much to the beauty of the show.

Magnificent bouquets were contributed by Mrs. E. R. Hoar, Mrs. F. R. Gourgas, Mrs. Frost, Miss F. J. Pritchard, Miss E. Hoar, and others; and a beautiful Rhododendron, and the delicate Linnaea, by Mrs. Pratt. A wreath of Euphorbia and scarlet Honeysuckle, by Miss Reynolds, was very handsome, and the Fuchsia and Cactus by Mr. John Brown, were rare and beautiful. William Munroe shewed a dish of superb Pansies and cut flowers, C. W. Davis, a dish of fine cherries, and W. W. Whieldon, a fine display of moss and other roses, and plants in great variety and beauty, and a pair of large cucumbers. J. B. Moore, contributed a large basket of Strawberries, Verbenas, Pansies and Geraniums, very fine; and Abiel H. Wheeler, shewed the first potatoes of the season. Col. Holbrook, sent a magnificent bouquet; Mr. Pratt, a monstrous bouquet of Laurel, Mrs. Pratt, Moss Roses, from plants raised from cuttings, which is an achievement in floriculture; Rev. B. Frost, fine strawberries, M. Pritchard, Boston Pine strawberries, and C. W. Goodenow, Hunt Russett apples in fine preservation; E. W. Bull, shewed Chinese Peonies, in four varieties, Roses in fifty varieties, and cut flowers.

Charming bouquets were contributed by Mrs. C. W. Goodenow, J. M. Dodd, Miss Mary Howe, Miss Wetherbee, Miss Rebecca Barrett, Misses Brown, Fred. Brown, John Hosmer, Mrs. N. Brooks, Miss Mackay, who shewed a fine Gladiolus, Mrs. S. G. Wheeler, Mrs. J. Heywood, Miss Sophia Ripley, Mr. Hudson, Miss Bates, and many others not marked with the name of the contributor.

Altogether, the show was very beautiful, and indicated both skill in cultivation, and good taste in the selection of plants, many of them being of the choicest kinds.

At the next exhibition—which will take place on Saturday, the 3d of September, we hope to have a still larger number of contributors, and to show fruits and vegetables in abundance.

For the Committe, E. W. Bull.

THE MOTH.

A great fuss is usually made "about this time" to keep off that delicate and beautiful little insect, the Moth Miller. She has certain instincts, as well as other people, and they lead her to deposit her eggs where food can be found when her young are "born into the world." So she, like a good mother, looks about industriously and claps an egg here and there under the seams of our best woollen coat, or in madam's wrist-cuffs, or boas, or muff; or, for want of better shelter and more refined feeding, will deposit half a score of eggs among the hair of the buffalo robes that hang in the carriage house. Now this is very innocent and commendable conduct throughout all bugdom, but is looked upon by us as a peculiarly insinuating proceeding by the bugs, and a form of deposit not altogether approved.

So the good housewife tries to defend herself with cedar closets, camphor draws, rosemary, sassafras leaves and other delectable odors, but the bugs care no more for them than does a hectoring gallant for a tap with his lady's fan; they are true to their instincts still, and will continue to be so in spite of all the nostrums of Æsculapius and all his disciples!

But, fair lady, there is one *infallible* remedy; simple, and always within reach. Shake your garments or furs well, and tie them up *tight* in a pillow-case or any cotton or linen bag, and hang that in the garret, or any where under cover, and your valuables *will be perfectly safe from the ravages of the moth.*

For the New England Farmer.

A NEW INSECT.

Mr. Brown :—I have noticed in some of the agricultural papers, accounts of the depredations of the canker worm; but in our vicinity an enemy has appeared upon our fruit trees, the apple and cherry, which threatens to destroy our entire crop. So far as I can learn, the foe is a stranger to our fruit-growers, and for some days was thought to be the canker worm of former days; but on examination it appears very different. It is similar to our former foe in some points—it is spread upon all parts of the tree, upon every branch, and when the limb is shaken, it drops from it, suspended by a web, then winds up its web and again gains its position on the tree. The trees, when badly eaten, present a dry and sere appearance. In all these points it is like the canker worm, as it is also in size, and to a casual observer, in passing by an orchard, it would be pronounced their work.—In many respects it is dissimilar, and evidently belongs to another class of insects. The canker worm is brown, this is nearly white, with two longitudinal stripes running its whole length; the canker worm is slow of motion, this is very quick and moves rapidly from place to place in all directions to escape an enemy—the canker worm moves forward by doubling or opening and throwing forward its head and forepart;—this is provided with 16 legs—6 near the head, 8 near the middle, and 2 at the tail, and uses them with great celerity in running. The canker worm has no shelter upon the tree, but lies out upon the leaf or branch; this forms itself a house by webbing the corner of a leaf, into which it retreats on the first appearance of danger; the canker worm rarely eats the fruit, if it can get leaves; this is now eating into and spoiling and disfiguring the fruit. Of the insect which produces them, I know nothing. My neighbors say about 3 or 4 weeks since, they noticed an abundance of small millers of an ash color, and they may have proceeded from them. If this insect, with its habits, are unknown, we have before us a work of careful observation, as the first descent of these depredators threatens more injury to our fruit than any other insect which has attacked our trees. If there is not enough to spoil my trees and fruit *entirely* now, I am sure that double the present number on those of my trees which are most eaten would not leave me an apple or a leaf remaining. I wish for information on this subject—are they in other places? Or is Sherburne exclusively favored with their presence? Have they been known before? if so, can they be prevented or driven off?

R. C. Stone.

Sherburne, June 21, 1853.

Remarks.—We regret that this article came a few hours too late for last week's paper. The insects spoken of have been numerous in this State, in New Hampshire, Vermont, Connecticut and New York, and probably in other States: but we have heard only from those mentioned above.

Your description of the insect generally agrees with our observation; but we can find only *six* legs instead of *sixteen*, as you say. The head is shaped like that of an otter, and near the back extremity of the under jaw there are two legs, one on each side, a short space intervenes, and then there are four legs, two on each side. Half way along the body, there are two protuberances which strongly resemble the spinneret of the house-spider, and two more of nearly the same shape at the tail or termination of the body. These do not terminate with claws as do the legs, but are blunt and have the appearance of being soft and spongy, and if used in walking, operate as does the flies foot on the pane of glass. We are inclined to think that these instruments are used both for walking and spinning its web, though in our examination of the insect under a pretty good glass, we did not see it spin as we have the spider.

We have received several short communications relating to the insect which we shall publish, but look, with some impatience, as we know many others do, to Professor Harris for a better knowledge of this new invader.

IS THE MOLE A DEVOURER OF VEGETABLES?

We answer no—he is a benefactor to the planter and gardener, instead of a destroyer of vegetables. Away, say we, with the erroneous ideas that they feed on garden vegetables and the newly planted seeds of the field crops; let us hear no more complaints against this little royal ermine coated friend, who is only a seeker and devourer of earthworms, and bugs, and the larvæ of insects deposited in the rich garden mould, or the manure drills of the cultivated fields. Ignorance is a greater tyrant than Robespierre ever was, and it is surprising that the natural history of at least all the more common animals, is not better understood, even amongst the educated and intelligent. Thank God! with all the introductions from old Europe,—she has never sent us a professional mole catcher—such lazy louts, as those who, with springs and snares, do jobs of mole-hanging for the gardeners of old England, at so much a head. The mole is a study for the lover of nature. His snug nest, deep in the earth, with walls of oak leaves, and lined with the most delicate grasses, shows that he is a considerable architect. The long galleries which lead out into those pasture grounds abounding in his favorite food, are scientifically constructed, and show him to be *nature's engineer*. His industry—flying by peculiar locomotion, with great rapidity, from one point to another—is a lesson to biped sluggards. It is true, that in search of food, he is a perfect *earthquake* amongst young vegetables; for he has no respect for their radicles when he plunges through the soft mould in quest of the insects and their larvæ, which feed upon their roots. The chief food of the mole, according to Bachman, is the earth worm, (*Lumbricus terrenus*,) and he says that they would each devour forty or fifty worms to satiate their inordinate appetites. They invariably rejected vegetables of all kinds, but would feed on flesh, chrysolides, and, even on each other, when not supplied with their proper food. One lived on a dead pigeon for a long time. These facts prove their carnivorous nature; and we would hazard little in saying that the mole is highly beneficial in destroying these insects. Vegetables are often cut and drawn into the ground,

and the charge is laid upon our *scraping* favorites. Another animal, says BACHMAN, one exceedingly shy in its habits, does the mischief; LECONTE'S pine mouse, (*Arvicola pinetorum*,) is the destroyer so much complained of and is truly very injurious to vegetables. Since the innocent character of the mole is established, upon the authority of the greatest of living naturalists, we hope that this numerous and varied family will be allowed, in uninterrupted safety, to dig and delve for the good of man, and thus keep under those insects which, breeding and dwelling in the earth, cannot be destroyed by the birds. They are both wise checks, which the Creator has placed here, to aid and restrain nature, by the exercise of their peculiar functions, and we say again, *protect the moles and the birds.—Southern Agriculturist.*

For the New England Farmer.

KYANIZING TIMBER.

MR. BROWN:—I saw in your last *Farmer* an inquiry respecting the kyanizing of timber. In your remarks you say that "the process has been abandoned, it having been ascertained that it does not preserve timber from decay." As I think such conclusions do not exactly agree with facts which have come under my notice, I take the liberty of sending you a short statement of the result of kyanizing in this place. In 1847, I was employed to kyanize the bridge-timber and cross-ties, for a part of the Providence and Worcester Railroad. The ties were of spruce, and hemlock, six inches square. From the small size of the ties, they soon began to fail to hold the spikes, many of the hemlock ones proving shaky. As kyanizing was a new thing to me, I felt a curiosity to see the result, and accordingly watched the appearance of the timber as the ties were from time to time taken up to substitute larger ones; and recently, a very large part of the ties at the joints of the rails have been taken up, and out of the several hundred which I have seen, not more than two or three ties were decayed at all, and those were evidently from unsound trees. The general appearance of the kyanized ties is such, that the people in the vicinity are purchasing those taken up, and setting them for fence posts, after having been used for ties about six years. Mr. Thompson, (the man who has the charge of keeping the road in repair at this end) tells me that he finds all the kyanized ties and timber free from rot. I will add that I have an open trough (for carrying off the water from a sink spout) made of kyanized spruce plank, partly in the ground and partly out, which has been in that position six years, and appears to be perfectly sound. I know that it may be said that six years is not sufficiently long to test the value of the process, yet as I see chestnut ties unkyanized, rotting sooner than the spruce and hemlock, I must wait a longer time to be satisfied that the kyanizing does no good.

Respectfully yours, J. H. BENCHLEY.

Milbury, June 20, 1853.

P. S. Should any one be disposed to try the kyanizing, I will cheerfully impart such information as I possess respecting the process, &c.

REMARKS.—Mr. B. will please accept thanks for the above remarks. We formed our opinion of the inefficiency of kyanizing from a conversation with a gentleman recently an engineer on one of the public works of the general government. We should be glad to know that the process is a valuable one.

For the New England Farmer.

COWS SHEDDING MILK—BUTTER-MAKING.

GENTLEMEN:—Can you, or any of your correspondents, make known a simple and effectual method to prevent cows from shedding milk?

Will some one who has practical experience, describe in the *Farmer*, the whole process of butter-making, including the place for keeping milk, (its ventilation,) the kind of pans, depth of milk in them, churning, salting, (and other ingredients, if any,) and place of keeping it in the tub, especially as respects dryness, or moisture, &c.

R. P.

DOCTORING CATTLE.—The following remarks under the head of Veterinary, in the Dec. No. of the *Prairie Farmer*, are so physiological, just, sensible and worthy of the attention of every farmer, that we transfer them to our columns. These seem to bear the impress of the "Old Drs." (K) cerebral perturbations, whose waves when they run high and furrow deep, never fail to float something ashore worthy to be picked up and garnered among our choice things. Dr. Kennicott always, *generally* says good things:

"We have one piece of general advice to offer, under this head. Treat all domestic animals upon the same principle that you would the animal MAN—making due allowances for the circumstances of the case.

The best general remedy is CARE; a comfortable shelter, and a kind and timely attention to natural wants; and the less medicine and the fewer medications the better. But if you *will* "doctor" your cattle, do not employ quacks, nor follow every floating recipe; but get a good veterinary practitioner, if to be had, who has read the books of his profession, and understands them; or better still, perhaps, read yourselves; and follow the indications, if you are right. And if not, better trust to nature, three times out of four. More cattle, as well as MEN, are doctored to death than people in general suspect."

For the New England Farmer.

SETTING FENCE POSTS.

DEAR SIR:—A correspondent, in your paper of June 4 asks a remedy for the upheaval of fence posts by frost, an evil which is more or less experienced among fence holders in proportion as the soil in which they are set is more or less wet, clayey, &c.

An excellent preventive for this action of frost, and one highly beneficial to the yard and contiguous grounds, may be found in thoroughly underdraining. Let the drain run parallel with the fence at a distance of two or three feet from it, and be of a depth greater than that to which the posts are set; where there is no superabundance of water, there will be but little action of frost.

Another method which we have often seen tried, was, to dig the hole considerably larger than the

post that was to occupy it, setting the post in the centre and filling around it with small stones, pounding them down—as the earth was replaced. By this operation great firmness can be given to posts.

The higher and heavier the post, the *deeper* it must be set in the earth to give it firmness, and the more care must be had to keep it in a perpendicular position while setting. If it inclines but slightly, either way, it will commence acting on the principal of the lever to throw the fence over.

To secure the durability of his posts, S. G. B. will find it for his advantage to invert them or set the top end downwards. In our own experience, we have found that a post from the same tree, will last one-fourth longer when so set, than it will if set as it grew butt end down, in which way moisture will arise from the earth through the sap vessels and diffuse itself through the post,—dryness follows, and moisture again succeeds, and rottenness ensues before due time has passed. If the post is inverted, the sap vessels can no longer give ascent to liquids, and no absorbing process will be going on. But where posts are inverted the part above ground should be reduced so that the diameter shall be no greater than it is below the surface, and if less, the less liable the frost will be to upheaval, leaning, &c. If the posts your correspondent proposes to use have been cut a year, and lain with the bark off, their durability will in no way be diminished but rather increased by the process. Yours truly, W. B.

Elmwood, June 6, 1853.

WHAT THE FARMER MOST NEEDS.

It is not a college endowed by the State, says a cotemporary; it is primary schools, to prepare farmers' sons and daughters for the higher walks in science as applied to agriculture. They need organization. They want farmers' clubs and neighborhood libraries of agricultural books. They need discussion. They need more intercourse, not only in their own town and county, but throughout the State and country, to see and learn what other farmers are doing, and if they have improvements, learn what they are, and adopt them. This is the greatest need of farmers. They need to become satisfied with their vocation; to get rid of the prevailing notion that farming is, necessarily, an unmental employment; that is, that the farmer has no occasion to think; has no occasion for education, and never can become wealthy or what the world would call respectable, while engaged in the culture of the earth, and therefore he seeks the first opportunity to escape from an avocation placed under ban not only by all others, but his own class also. The great need of the farmer is, that he shall declare himself independent of all other classes; at least, more so than they are of him, and of course he is entitled to engage in any other calling whatever; and if he is a man of toil, that is no reason why he should not be a man of intellect. The great need of the farmer is organization, and this must be accomplished by a few self-sacrificing men, who will undertake the labor of establishing and maintaining farmers' clubs, in every neighborhood. Farmers need to drop politics and take up agriculture. They must talk, read and think, and they will be sure to act or their children will act for them.

WEEDS.

"One year's seeding makes seven year's weeding."

This old proverb conveys an important truth. Thoroughly to eradicate the plants to which one prolific parent will give birth, is a matter of no small trouble and expense. The prolification of some species of noxious weeds, is almost beyond conception, and when permitted to mature their seeds on soils under cultivation, and well fitted for their support, they are a great evil, and a source of no small trouble and annoyance to the farmer, to say nothing of the injury they inflict upon his crops. It is an excellent plan, therefore, to go over the cultivated fields and lands late in autumn and eradicate every weed that can be found. No matter how small or insignificant may be its appearance, it will assuredly produce seed; and this, when disseminated broadcast over the fields by the winds, will germinate, and give birth to a progeny, the perfect eradication of which will take more of the time and energies of the laborers, than the crops will warrant.

It has been remarked by the moralist that the thistle and mullein are ever the inseparable companions of the sluggard, and it must be confessed that the atmosphere which appears so congenial to the one, appears to possess something in its constitution highly advantageous to the other. Wherever found, weeds indicate one of two things:—that the farmer has injudiciously undertaken more than he can accomplish, and do the work well, or they indicate a state of indolence and inactivity.

Some of our agricultural friends are in the habit of gathering up the spurious vegetation of their fields, and depositing it in their yards and styes. This is an admirable plan, provided the vegetables have not become mature. In all cases, however, where the ripening of the seed has been effected, and the vital principle is sufficiently developed to ensure propagation, the practice can scarcely be attended with other than the worst results.

A very erroneous opinion appears to prevail in relation to the degree of heat engendered by manure while undergoing the process of fermentation; the common presumption being that it is sufficiently intense to ensure the destruction of any seed which may be exposed to the influence of the fermenting mass. This supposition, however, will, upon careful examination, appear wholly unsustained by results. The fermentation which putrescent manure undergoes—unless under very peculiar circumstances—is rarely, if ever, found to rise sufficiently high to ensure this object. The seeds of the common red sorrel—one of the most pestiferous of all weeds in cultivated land, as well as those of the mullein, white weed, and numerous other plants which so annoy us, appear to be in no way injured by the utmost degree of heat that

can be produced without an actual combustion of the heap.

On the contrary, many seeds appear to derive an actual advantage from it,—the heat to which they are subjected, inducing a more speedy germination and development, so that by the time the soil is fit for their reception, or for the reception of the manure in which they are contained, they are just in the proper condition to take root and vegetate, before those upon which the husbandman bases his expectation of a crop, have had time to swell. Owing to this premature development, the fields are often stocked with a spurious vegetation, and that which was supposed to be the true economy, results in a ruinous waste; the small quantity of manure accruing from the decomposition of the haulm, being purchased at an enormous outlay of labor; and what is still worse, the soil instead of being purged of its noxious weeds is fouler and more prodigally infested than before. Those persons, therefore, who contemplate cleanliness of cultivation, should destroy the weeds that infest their fields before they mature their seeds. This may require care and labor but is not impracticable. But should any escape the hoe, the scythe, or the hand, let them be carefully gathered together in some convenient place and burnt.

The thistle, in some districts is one of the most troublesome weeds with which the American farmer is called to contend. Yet we often see it growing in farm yards, gardens, by the road-side, and even in the corners of cultivated fields, in patches sufficiently extensive to ensure the production of seed enough to "stock" an entire township!

This is bad policy. Although the thistle is a "hard customer," and a most impoverishing tenant, it is yet a harder master. When once permitted to usurp the soil, its eradication is attended with much difficulty, and its toleration with ruin to the richest soil. It is now common to consider all productions as *weeds*, which are not purposely planted or sowed. The wheat that vegetates in the corn field, and the corn plant that springs up accidentally among the cultivated plants of the garden, is as much a *weed* in the strict acceptation of the term, as the burdock which rears itself in the pasture, or the thistle which fouls the mowing field.

As most species of spurious vegetation are of an indigenous character, they possess, naturally, a hardiness and vigor of constitution which enables them to subsist and flourish on soils which are poor and thin, and to survive injuries, which no valuable or cultivated plant, not indigenous in the soil, can do. This tenacity of life will suggest the necessity of extra hoeings, and greater care in their eradication than is usually bestowed.

For the New England Farmer.

STATE REFORM SCHOOL AGAIN.

Mr. Editor:—Some of your correspondents kindly endeavor to remove the stigma impressed on the Institution at Westborough, by the supposed neglect of the personal condition of the boys. No one will more heartily rejoice, than myself, if this can be fairly done. Having advised to the committant there of several boys, and given the assurance, that they would be well cared for, I could not endure the thought, that anything should appear to the contrary. An Institution like this, under the special guardianship of the State, especially the State of Massachusetts, which has the reputation of being the model example in all benevolent enterprises, should be, like Cæsar's wife, above suspicion.

I perceive that something is said about using the lands connected with this farm, and the *two other farms* lately purchased by the State, for the purpose of experiments in agriculture. Why may not this be done? At either of the Institutions, it will be easy to command any amount of labor that may be desired, at the same time promoting the health and comfort of those that labor.

Will it be said that the lands are not fitted for successful experiments? Then let the experiments be fitted to the lands. The lands are a part of the Commonwealth, and we want to know, how all our lands can be turned to the best account. He who can show how two bushels of grain can be made to grow, where but one grew before, will deserve well of his country. A proper examination and analysis of the soils on these estates, will soon enable the Board of Agriculture to do this. My notion is, to place the cultivation of these lands under their direction, so far as it can be done without prejudice to other more imperative purposes of these establishments.

June 25th, 1853.

For the New England Farmer.

GIRDLED APPLE TREES.

Mr. Brown:—Dear Sir,—I noticed in the last number of your valuable paper, an article respecting apple trees; stating that they would grow after being girdled, if taken care of. I have a case to prove that they will grow without any care.

Last June I grafted some small trees in my pasture, leaving some of the larger limbs to grow until this season. In July I visited them, and found one had too many limbs, taking all of the sap from the scions. I took my pen-knife and cut away the bark from two of them, for the space of five inches, thinking it would kill them. I did not visit them again until a few days before I received your June number of the *Farmer*. Judge my surprise, when I found these limbs all in full leaf, drawing from the others nearly all of the sap. I examined them closely, to see if their was not some communication, but found none. I saw, however, that new bark had been formed on the limb part, nearly three inches, but none on the part next the body. This led me to conclude that the watery matter collected from the ground by the spongioles, is sent up through the woody fibres to the leaves, and there changes its oxygen for carbon, the material it wants to form wood; and descends along the trunk forming a layer of wood next to the bark. Now if there is a place denuded

it cannot pass it, leaving the part below without this fibrous matter, unless there should be twigs and leaves below the girdle, and consequently no growth. This is my theory; please set me right if I am in the wrong, remembering that I am a young farmer. L. W. C.

Globe Village, June 20, 1853.

For the New England Farmer.

CROSS FERTILIZATION.

Mr. Editor:—My experience does not correspond with the theory of your correspondent of June 22d, in relation to producing fruit trees from seeds. He says, "the farmer selects his best apples for eating and the market, and makes the rest into cider. The pomace he plants for a nursery. These seedlings will be of the poorest kind." I think it best to select seeds from young, healthy and unworked trees, and these are generally unpalatable apples, fit only for cider. What is the aim of nature? It is to furnish a healthy reproduction of the plant, having the characteristics of the parent or parents, as the case may be. And to continue its species it must have perfect seeds. The object to be attained by the fruit grower is pulp, not seeds. It is a well known fact, that when we obtain a good fruit, it has a good and large pulp, with small seeds. With many of our good stone fruits, the seeds will not germinate.—Therefore we must not begin with fruits that have reached their highest limit of perfection.

In these days of cross breeding, when the principle has been reduced to a science, will it be good policy to plant seeds from good trees, which he says are the production of seed of two varieties, mixed by the pollen? It is obvious to all acquainted with fruit or plants, that there are certain limits in crossing plants. The offspring of many of our crossings, (being mules) will not produce perfect seeds. Seeds produced by crossing are found to possess a character composed of the characteristics of both their parents, although some may be superior to their parents. Would it not be a better way to plant seeds produced by cross fertilization, than those gathered promiscuously from a good fruit-bearing orchard? Certainly a much larger proportion of our seedlings would bear good fruit, therefore we should need fewer trees, because we could have a few seeds of each crop. While in the other way they might all be crossed by the earliest blossoming tree in the orchard, and in that case would all have the same male parent. Each seed has a *pistil*, and at its summit the stigma. Some fruits, as the strawberry, have many pistils. By cross breeding, each pistil may be impregnated by the same male, by keeping the flower covered with a gauze bag. A stigma once impregnated, cannot be impregnated again. In the natural method of impregnation, I think it would be an uncertain business. It might be fertilized by its own pollen—or a part of the seeds, or a part of a tree might be so fertilized. The stigma is not always in a right condition to receive the pollen. It may be too late, or too early. The wind or insects may bring pollen from different and far off trees, and each seed may be fertilized by pollen of different trees. Such being the case, can we adopt his mode of planting seeds with a reasonable prospect of success? M. Poiteau informs us, that the celebrated Duhamel, during the long course of his scientific career, planted the seeds of all the best fruits that were eaten at his table, and not one produced fruit worthy of cultivation. This French mode has long since exploded. The Belgians are admitted to be the gardeners of the world, and as their mode of producing new fruits has been more successful than any other, will it not be better to follow them?—Their theory is, that in proportion as a fruit is removed from a wild state or state of nature, by reproductions, or by planting the seeds of the last production, the fruit will become ameliorated until it reaches the highest state of perfection of which it is susceptible, which is usually about the fourth or fifth generation, and that from this point it deteriorates or passes back to its original qualities.

Remarks.—We believe there is much more talk than actual knowledge upon the subject of the above communication. We know not that we are prepared to endorse fully the leading idea of our friend N. Are the labors of the past all to be thrown away? Are our labors to be of no use to posterity? Would we improve our apples, must we go back to the native crabs? Would we improve our stock of cattle, must we go to the buffaloes on the prairies of the West, or to the wild herds of the Tartars on the steppes of Central Asia?—Would we improve the race of men, must we seek our wives among savages, or train up the children of savages instead of our own?

Has it ever been demonstrated that native stocks do not deteriorate with the lapse of time? But we leave the subject to our correspondents.

For the New England Farmer.

A NEW WEED.

Mr. Editor:—I send you here enclosed a specimen of weed, found on the farm belonging to Wm. C——, in the town of T——, N. H., and is nowhere else to be produced, in this vicinity. When first discovered, which was five or six years ago, there were but a few sprigs; now it covers nearly the half of an acre. It is very troublesome, and difficult to eradicate. No one that has seen it, is able to identify its name; and, as I presume you are a botanist, you may be able to give me information respecting it. Such information, if in your power, will be gratefully received.

W. K——r.

Tuftonborough, N. H.

Remarks.—The plant enclosed is the "snap dragon," or "toad flax," (*Antirrhinum linaria.*) It is not supposed to be a native, but that it has been introduced. It is, however, very common by the road-sides about Boston, and is now probably following the fashion, and taking a trip to the mountains. It is a perennial, and should be immediately exterminated by mowing when in flower, as it seeds abundantly, and by plowing. Every farmer should be willing to do something for the public good, even though he be not immediately rewarded thereby—so plow it under.

CULTURE AND VALUE OF THE PARSNIP.

The following excellent article on the culture and value of the parsnip, is worth a careful perusal by every cultivator of roots. We think the writer mistaken in saying "that no insect or bug attacks them at any stage of their growth." They are always infested in a greater or less degree, with a worm which grows to a large size and becomes very beautiful before changing (as we suppose he does) into the butterfly form. They are very destructive to the parsnips set for seed, so that many cultivators have abandoned raising parsnip seeds for the market. We have never sowed them in the fall, and cannot say, from our own knowledge, how they would succeed.

CULTURE AND VALUE OF THE PARSNIP.

MESSRS. EDITORS :—As one who has lived twenty years upon a farm, searching all the while for *reliable* information, both from his own experience and from that of others, ought to be in possession of some "fixed facts" and settled opinions; and as duty, propriety, and fraternity require that we should allow others the opportuuity of benefiting by our experience, I feel moved to give you a few items of information which I think very satisfactorily settled by evidence within my own observation.

Disliking long prefaces, and trusting that all your correspondents will dispense with them, I commence the brief summary of my experience and observations of twenty years, by a statement in regard to the value ef parsnips.

Parsnips for Hogs.—One of the things which I consider well settled, and a reliable and useful item of knowledge, is this: that parsnips, either raw or cooked, but preferably cooked, with the addition of apples, potatoes, &c., occasionally, were it only to prevent the appetite from being cloyed by "eternal sameness," constitute the best kind of food whereon to fatten a hog. They are also the best kind of roots for milch cows. Both hogs and cows eat them with avidity, and to the milk and butter they communicate a good, a delicious flavor. I have seen it stated some years ago, that beef made from parsnips brings the highest price in the London market. I think, though I may be deceived by imagination, that pork made from feed chiefly composed of parsnips, is sweeter than when made from anything else.

This is not the only recommendation which may be justly bestowed on the parsnip. Among its other good qualities is this—that it requires no care or housing in the fall, as all other roots do. In all the Middle, Northern, and Western States, potatoes, carrots, and turnips must be harvested and housed, or buried; and even when all this is done, and with good care and judgment too, a portion will frequently be ruined and lost by frosting, overheating, or decay from other causes.—Parsnips, on the other hand, require no care in the fall, as they may be left without injury in the ground all winter. They may also be planted earlier in the spring, as the frost does not injure them, even at the earliest stage of their growth, so that this root crop interferes the least of any with employments which crowd upon the farmer in the spring and fall. It continues to grow through the whole season, until the ground freezes in winter; it requires no expenditure to gather or store it; it may be taken up on several occasions during the winter, and the roots that stay in the ground *all* winter, are not injured, and probably improved, by the frost. Parsnips seem to be eaten with more relish than either turnips or potatoes, and yield, in the raw state at least, a greater amount of nutriment.

Another advantage in cultivating parsnips is, that on a suitable soil—sand or loam, rich or well manured, and deep plowed—a large growth may be secured. At the rate of 1,200 bushels have been gathered from an acre of ground.

Parsnips may be planted either in spring, or in the latter part of summer, in August or September. The ground should be well manured, mellow, and deeply plowed, and the seed sown in drills, so as to have plants to thin out, while preserving them at about eight inches apart. This will probably require at about the rate of two pounds seed to the acre. The drills should be two feet apart, and the space between well cultivated and kept clear of weeds. If sown in the spring, the earlier the better. A larger growth may be secured, however, by sowing the seed in September. There will be some considerable growth before the ground freezes up, and the growth will commence again as soon as the frost leaves the ground in the spring, which will continue throughout the whole season, without running to seed. They will thus have a growing season of about twelve months; whereas, when sown in the spring, they can grow only eight or nine months.

All the advantages of this root crop have not yet been named. Among them are these—that they seem uninjured by either a wet or dry season, and that no insect nor bug attacks them at any stage of their growth. OBSERVER.

AGRICULTURE IN NEW HAMPSHIRE.

The extract below, is from the late message of Gov. MARTIN to the Legislature of New Hampshire :—

Agriculture is our leading interest, and although our State is more mountainous than any of our neighboring States, yet we can justly boast of large quantities of luxuriant interval; our uplands are productive and afford a pasturage unrivalled in excellence, and nowhere can the necessaries, convenience and comforts of life be found, combined in greater abundance. Our agricultural societies, both State and county, are doing much for husbandry, and the growing interest in them evinced by most of our citizens is a favorable indication of their utility and of the benefits to be derived from them. The free interchange of information, scientific and practical, can not be too intimate, and the analysis of soils, their adaptation to the different crops, the various and best modes of culture, the rearing of stock, and orcharding in all its varieties, are matters of the deepest interest to the agriculturist. The three State Fairs which have been held have proved highly successful, and have afforded gratifying evidence of their usefulness. Our lands improved and under tillage number 2,251,488 acres; value of farms $55,245,-997; farming implements and machinery $2,314,-125; live stock $8,871,901; orchard products $248,563; domestic manufactory $393,455. We

raise an average crop of 185,658 bushels of wheat; 183,117 bushels of rye; 1,573,670 bushels of Indian corn; 973,381 bushels of oats; 70,856 bushels of buck-wheat, 4,304,919 bushels of potatoes; and we produce 1,108,476 lbs. of wool; 6,977 lbs. of butter; 3,196,663 lbs. of cheese; 1,294,863 lbs. of maple sugar; and 598,854 tons of hay. Let the young farmers of this State estimate the foregoing products of the farm and dairy at fair average prices, and see what a fine aggregate of values they will have as the result, bearing in mind the while, that he who most increases the productiveness of the earth, is the greatest benefactor of his race. I would renew my suggestions of last June, in regard to the establishment of an Agricultural Commission.

USE OF FLOWERS.

All things have their uses. The FLOWERS not only please the eye but improve the thoughts, making them more gentle and better. The full-blown rose, expanded to its utmost limits, and shedding its fragrance on all within its reach, seems emblematic of a good heart, beaming forth its kind influences on all around. If the flowers could *think*, and *feel*, and *talk*, what lessons of gentleness and love would they teach us. All children love them; the old man leaning on his staff, pauses by the wayside and contemplates them with delight. A vase of fresh flowers in the sick-room stands as an emblem of the new life that will come when the tried spirit shall bloom with perennial lustre in the skies.

FLOWERS have kindly influences upon all; we can almost believe that there were *no* flowers in Paradise, or EVE had not yielded to the tempter. BACON and BURLEIGH did not disdain to bend their intellects and find recreation from their cares in the flower garden. POPE and Lord PETERBOROUGH, and ROUSSEAU, thought they could find friends in the flowers when they had no others. The Emperor DIOCLESIAN preferred his garden to a throne, at least, so Cowley said, and Sir WILLIAM TEMPLE had the amiable weakness to desire to have his heart buried in his garden.

What a beautiful custom was that in the island of Delos, at a marriage ceremony, where the inhabitants "assembled at day-break, crowned with flowers; flowers were strewed in the path of the bride and bride-groom; the house was garlanded with them; singers and dancers appeared, crowned with oak, myrtle, and hawthorne, the bride and bridegroom were crowned with poppies; and upon their approach to the temple a priest received them at the entrance, presenting to each a branch of ivy,—a symbol of the tie which was to unite them forever." The Greeks crowned the dead with flowers, and the mourners wore them in the funeral ceremonies.

And we love them and feel their influence *here*, cold and indifferent, as some say New England people are. No custom prevailed among the Greeks more appropriate and beautiful than that of placing flowers before the congregation in our churches. This may be seen on any Sabbath in the First church in the old town of Concord, Mass. They have long been furnished by our fellow townsman, W. W. WHEILDON, Esq. On the last Sabbath the bouquet was in the form of a cross, and nothing could be more suggestive of every thing that is "lovely and of good report." The *cross* was there, to be sure, but covered with nature's sweetest offerings; roses, the fox-glove, phloxes, the mountain laurel, double seringa, larkspur, spirea, and under the arms of the cross the beautiful Deutzia scalva, with its modest bell-like flowers. Did not sincere *heart-offerings* go up with the fragrance of the flowers to the Elysian fields above!

Flowers *do* speak, then, a clear and intelligible language; all, in a greater or less degree, find enjoyment in flowers.

> "Are they not all proofs,
> That man immured in cities, still retains
> His inborn, inextinguishable thirst
> Of rural scenes?"

For the New England Farmer.

WARTS.

MR. BROWN:—Dear Sir,—Seeing that you are ever ready to answer any inquiries, I would like to know what will take *warts* from the teats of cows. By answering the above, you will oblige,

GEO. CRUICKSHANKS.

Swampscot, June 21, 1853.

REMARKS.—We have known warts in numbers on the hands, cured by wetting and rubbing them occasionally, with a pencil of lunar caustic. Of course it must be used with care. We copy a paragraph from Cole's "Diseases of Animals."

"For warts, cut them open, and apply blue vitriol, (*sulphate of copper*,) in powder. A physician was induced to try this, (and it was attended with excellent success,) from learning that a boy had many warts cured on his hands by sorting brass nails, from the influence of the copper in the brass. Neither the cutting nor the application is painful. Or apply to warts raw grated carrots, mixed with salt. Warts are sometimes cured by the application of spirits of turpentine, or lunar caustic."

We would not advise, however, to *cut the warts open*, as there is danger of making a sore more troublesome than the warts.

FINE CHERRIES.—Mr. MIRICK, one of our friends from the United Family, at Harvard, handed us a branch from a cherry tree, the other day, loaded with most delicious fruit. It was so large as to spoil the old saying that "it isn't worth while to make two bites of a cherry," dark red, sweet, flesh firm, and heart-shaped. They call it by its French name, LOOK-NO-FURTHER, and really, with plenty of such at command, one would scarcely care to trouble himself for other kinds. We have rarely seen a finer cherry.

FRENCH BUCK, "MATCHLESS."

This is the figure of a fine French Buck, owned by Mr. GEORGE CAMPBELL, of West Westminster, Vt. In his description, he says the French Sheep are so well known at the present time, that it is necessary to say but little of them. "Matchless" may truly be said to belong to the "upper ten." He proves to be an excellent stock getter; is four years old, and weighed, on the first of last March, 280 lbs. His wool is very thick, good length, and fine. The French sheep are large and strong, and are well calculated for the production of both wool and mutton. The ewes are good breeders, and generally good nursers, and if well kept, will breed twice a year, if desired. They require good rich sweet pastures in summer, and good keeping in winter. These sheep are well adapted to locations where mutton, as well as wool, is considerable of an object. They are excellent feeders and if fed high will gain in flesh while suckling their young.

☞ Horticulture is that great gift of God to man, which makes desert places into gardens, and so beautifies the abodes of men as to resemble Paradise. Buildings without Horticulture, are but landmarks in a wilderness.

For the New England Farmer.

PALMER WORM.

MR. EDITOR:—After a lapse of upwards of forty years he has made his appearance this season; fulfilling the declaration of Scripture, that what the *canker worm* hath left, the *Palmer worm* has eaten. The habits of this worm are much like those of the canker worm; by a sudden shake of the tree it webs down in the same manner; it is not much more than half as large, and is of various colors. You take him in your hand and then touch him and he will snap out at once.

This insect you will find in many of our orchards, gardens and groves; he makes the most tender leaves his food; for instance, the Hubbardston Nonsuch apple tree has been eaten more than any other. The trees that leaved out late, or were transplanted this spring, have in many places been made entirely bare.

He does not attack the peach or pear tree, or grape vine. In the forest, he devours all that comes in the way; not even the white pine escapes its ravages.

This old enemy of trees is thrice as formidable as the canker worm, and I know of no way to check his ravages except in the use of whale oil soap, and this can be applied to small trees with good success, by the use of the syringe. The sprinkling of air-slaked lime over the small trees, I have found to have good effect.

The plum trees that I had limed over to keep

the curculio from, have not been eaten by this insect, while those that had not this preparation, have been injured.

I notice that his ravages have been very extensive in Lynn, Danvers, Topsfield; and more or less in most of the towns in Essex county. If its true character and habits are not found out, and a remedy applied, all will be *lost*.

Topsfield, June 25, 1853. J. Lake.

For the New England Farmer.

THE PALMER WORM.

An insect, formerly known by this name, has appeared in great numbers upon fruit and forest trees, during the past month. Apple, cherry, and plum trees, and, among forest trees, the white oak, have suffered more or less from its depredations in all parts of New England, and in the State of New York. Communications concerning it, accompanied by specimens, have been sent to me from Bradford, Andover and Westboro', Massachusetts; from New Haven and Salisbury, Connecticut; and from Keene and New Boston, New Hampshire. About the 10th of June, the same insects were first observed on fruit trees in my own garden, where, however, they have not been numerous, and have not done much injury. In other places, their ravages have been deplorable, and have been compared to those of canker worms; the leaves of trees attacked by them looking as though they had been scorched by fire. In some orchards, they have not spared even the fruit, which has been attacked and mostly destroyed by them. They have now come to their growth, and have finished the course, in their present form, for this season.

These insects agree, in all respects, with the accounts given of the palmer worms that prevailed in many parts of New England, in June, 1791. It was remarked, after this great visitation, that they did not return the next year in the same places. Whether, until the present season, they have ever again been observed, in the like profusion, is unknown to me. Probably some of these insects might have been found almost every year by diligent search. Perhaps they are the same as those heretofore called *fire-worms*, of whose history I cannot find anything in print.

A particular description of the palmer worm may be thought unnecessary and superfluous, since the insect has been so recently and so widely observed, and has been pretty well described in the newspapers. But, as I have little more to add concerning it, and have been applied to publicly and privately, for information on the subject, it may be proper to put on record an account of it as it has passed under my own observation. In its early stages, this worm, or caterpillar, though varying somewhat in color, is mostly pale green, with two slender brown lines along the top of the back, and a pale brown head. It has sixteen feet, six of which, near the head, are jointed, and end with a single claw; the others are merely fleshy protuberances without joints, the terminal pair being the longest. When fully grown, the insect measures half an inch, or rather more, in length, and then bears a striking resemblance to the common bud-worm of the apple tree; the back assuming, generally, a darker color, and the sides of the body being marked with black points, arranged three together on each side of every ring. Two blackish semicircular spots or marks, may also generally be observed, at this period, on the top of the first ring. A few short hairs may be seen on the body by means of a magnifying glass. On my own trees, these insects have confined themselves mostly to the terminal leaves and buds; on others, in places where they have been numerous, they have spread over all the leaves, and have devoured the whole green substance, leaving only the network of veins untouched. They are exceedingly active in their motions, moving either forwards or backwards at pleasure, with a kind of impatient jerking motion, which renders it difficult to hold them. When the trees are shaken, these worms drop, and hang suspended by threads, like canker worms. Whether they leave the trees in the same way, when they have finished their course,—if indeed they do leave them at this time, and where they undergo their final transformations, I have not ascertained, being prevented by other engagements from watching their further progress. One of my correspondents has informed me that these worms mostly disappeared after a late hail storm; and another one states that they all took leave during a heavy shower on Monday last. A few, that were kept for observation in a glass jar, have covered themselves with a thin web of silk, and some of these have already taken the chrysalis from within their webs. More than half of my specimens have been stung by ichneumon flies, which have deposited a single egg in each one of their victims. The maggots bred from these eggs, are now leaving the lifeless worms, and are spinning themselves up in white, oblong oval, silken pods or cocoons. If the palmer worms elsewhere have suffered the same fate in the like proportion, we have little cause to fear for their ravages next year. The chrysalis is about one quarter of an inch long, of a pale yellowish brown color, and differs from that of the bud-worm in not having transverse rows of teeth, or little notches, around its body. The final transformation remains to be observed; and, until the insect is obtained in the winged or moth state, its scientific name cannot be determined.

On the morning of the 28th of May, I saw, in the cemetery at Worcester, immense numbers of gray or whitish moths, about twice the size of the common clothes' moth, flying about almost in swarms, being disturbed from the grass and trees by my passing. Two days afterwards, a few of the same little moths were seen in my garden; and Dr. Sanborn informed me that his garden was alive with them on the 23d of May. They were also very numerous, about the same time, at New Haven, and in other places since visited by the palmer worms. But whether the latter were, or were not, the descendants of these little moths, it would not be safe now to say. The moths, though not wholly unknown to me by sight, before this spring, have heretofore been so rare that my collection contained only a single specimen, and that in too poor a condition to enable me satisfactorily to investigate its scientific character and ascertain to what modern genus it belonged.

As attention has been generally directed to the habits of the palmer worm during the present season, other persons, more favorably situated than I am, may be expected to pursue and make known the further history and transformations of this de-

structive insect. I regret not being able to give a better account of it at this time, and still more that the pressure of my official duties necessarily interferes with the continued and further investigation it would otherwise please me to make upon it. T. W. HARRIS.

Cambridge, Mass., July 6, 1853.

REMARKS.—Professor HARRIS will please accept our thanks for the above interesting and valuable paper. We can find no account of the worms that appeared in 1791, and are at a loss to know why this insect is called a *palmer worm*.

In the book of Joel i: 4, it is written; "That which the *palmer worm* hath left hath the locust eaten; and that which the locust hath left hath the canker worm eaten; and that which the canker worm hath left hath the caterpillar eaten." On reference to the edition of the Scriptures published by Knight, London, we find the following:

"*The palmer worm.*—The Hebrew writers generally agree that the four insects mentioned in this verse are different species of the locust; and this opinion has been supported by Bochart, with his usual ability and research. There is, however, a very strong objection to this conclusion, in the fact, that the three rendered 'palmer worm,' 'canker worm,' and 'caterpillar,' in our version, were not regarded as locusts by the Seventy, who were likely, in this matter, to be acquainted with the real meaning of the Hebrew words, and who wrote much earlier than any of those Hebrew writers who consider all the words to denote varieties of the locust.

"The original name, *palmer worm*, is *gazam*, of the Septuagint. This seems to be the caterpillar which was called by the Roman *ab erodendo*, from gnawing, as Isidore remarks. The ancients describe it as a worm, which rolls up itself in the leaves of herbs, and especially of the vine, including perhaps several species of insect under one name. Plautus, an old Latin poet, speaks of it as a mischievous "beast," that rolls itself up in a vine leaf. It does not fly like the locust from plant to plant, or run hither and thither like some other insects, and leave them half eaten, but continues upon the perishing herbage, till, by its sluggish motion and lazy jaws, it has devoured the whole. The ravages made by caterpillars are too familiar to render any expatiation upon them necessary. A reference to the respective meaning of the Hebrew, Latin and Greek terms, makes it probable that the same kind of insect was intended by *ab erodendo*. The Hebrew meaning to cut, to shear. The Greek, to bend, and the Latin gnawing—the first and last pointing out to us its mischievous operations, and the second, the habit of rolling itself up in the leaf, to protect itself against those enemies which are every moment upon the watch to secure it. The Arabic version has *dud*, which seems to be a general denomination for what we call the larva state of an insect, such as, for instance, the caterpillar is in regard to the butterfly, being then in the second grade of its progress towards the perfect or *imago* condition." If this gives a correct description, the insect which has come upon us with such a withering power *is not the palmer worm!*

For the New England Farmer.

STATE REFORM SCHOOL.

MR. EDITOR:—I perceive your brother editor of the *Culturist and Gazette*, at Pittsfield, has kindly copied my remarks, supplementary to your article on the State Reform School at Westborough, and interlarded such exceptions, as tend to put the boot on the other leg. Can it be, sir, that we, and those who were with us, were entirely in error, in our conception of the condition of things at this establishment? I should like to know whether the good doctor has ever been there himself. He expresses a *quere*, whether it is possible to keep so many boys in a clean and healthy condition. If it is not, I should say, they should never be brought together. Even the State itself has no authority to administer a slow poison, in the form of *filth* and *vermin*.

His notions of "the connection between sin and punishment" are so abstract, that I must leave them to be settled by the theologians of the schools. I make no pretension to such knowledge. If I rightly comprehend the purpose of this Institution, it is for the reception and education of boys *during their minority;* of those not sufficiently matured in crime, to be fit subjects for punishment in our gaols and houses of correction. He speaks of the benefits that may accrue from keeping alive in their memory, the errors of which they have been guilty. With all due respect to the doctor's opinion, I think it will be better to obliterate the recollection of past errors, by exciting a generous ambition to do well. Sir, what hope is there of a man or boy, who constantly feels, that he is looked upon with an eye of jealousy and suspicion? If you would have improvement, you should inspire confidence.

"To err is human, to forgive divine."

June 30, 1853. ESSEX.

COWS HOLDING UP THEIR MILK.—It is well known that many cows when they first come in, when their calves are taken from them, will hold up their milk, sometimes to such a degree as almost to dry themselves before they will give it down. "A few years ago," writes a correspondent of an English newspaper, "I bought a young cow which proved to be very wild, and when I took away her first calf she would not give her milk. I had heard it remarked that putting a weight on the cow's back would make her give her milk down. I accordingly drove her into a stable, got a bushel of grain and put it on her back. While in this position she had no power to hold up her milk, for it came down freely. After doing this a few times, and afterwards putting my hand on the back of the cow, it would give way and she would immediately give down her milk." The rationale of this treatment appears to be that the weight counteracts the upward tendency of the animal's muscular action.—*Rural New-Yorker.*

PRACTICE OF SHOEING HORSES.

Mr. Chas. Percival, veterinary surgeon of the Royal artillery, furnishes the following communication to one of the Dublin papers:

I have lately been devoting much attention to shoeing, and flatter myself that the horses under my care are as well shod as any in her Majesty's service.

The shoe I found in use here was made concave next to the foot, and flat on the ground surface, than which, in my opinion, nothing could be worse. This shoe I have had reversed, making the latter as concave as the foot will possibly admit of, leaving only sufficient room between the shoe and the foot, for the pricker to pass freely round, to remove dirt, &c. To the heels of the shoe I have given an inclined plane outwards on the foot surface, with three nails on the inside and four on the outside. The heels, instead of being cut off straight, are well sloped, and about the same thickness as the toe. The shoe, one-third as thick at the heel as the toe, recommended by the late professor, the majority of our horses could not travel in. There are many pernicious practices which smiths in general, if left to themselves, fall into, viz:

1. Mutilating the frogs by improper cutting. I have at length got my farriers to understand that the only part of the frog which ever requires cutting, unless ragged, is the point, to prevent the sensible frog being bruised between it and the coffin bone.

2. Inflicting serious injury to the crust by an improper use of the rasp, but especially the coarse side of it.

3. In fitting the shoes, by cutting too much out of the crust at the toe to admit the clip. The shoe is consequently set too far back, instead of being fitted full to the crust, and afterwards rasping away the crust, making the foot, in fact, to fit the shoe, instead of the shoe to fit the foot. This is a faulty practice, and very seriously so, which smiths in general are very apt to fall into; one, too, which renders the crust shelly, for that part into which the nails are driven from time to time is in this way rendered weak.

4. In turning shoes, smiths in general do not attend sufficiently to beveling or sloping the edge of the shoe from the foot to the ground surface, which I consider of great importance, especially if horses are given to cut or interfere in their action.

5. Cutting the heels of the shoe off straight. This is also a very bad practice. If well sloped, like a shoe for hunting, to which there cannot be any objection, they are less liable to be pulled off by the hind shoe catching in them, and contribute more to safety of both horse and rider.

6. Leaving the inner edges of the hind shoes at the toe sharp, which, if rounded, will in a great measure prevent over-reaches, as well as render the fore shoes less liable to be pulled off by their catching in the heels of the former. Squaring the toe of the hind shoe for horses that forge, or "carry the hammer and pincers," as it is termed, leaving the horn projecting over the shoe, is, in my opinion, good as a general rule, not only preventing that unpleasant noise, but rendering horses less liable to overreach and pull off their fore shoes, provided, however, attention be paid to rounding the inner edge.

7. In rasping the under part of the clinches, farriers are very apt to apply the edge of the rasp improperly to the crust, forming a deep groove round the same, which cannot but be injurious to the foot, and, together with taking away too much of the crust in finishing off the foot, must have a tendency to render it shelly. Curving the shoe at the toe, after the French fashion, where horses go near the ground, I am very fond of; but I cannot see any advantage in it as a general practice.

Remarks.—We hope every shoer of horses who reads this, will compare its suggestions with his practice. As is the case with most of the mechanics of this country, there is only one in a hundred that understands his business. It requires *art*, to shoe a horse properly, as well as to make a watch. There are important principles involved in the operation which the smith should study and understand. We believe there are more horses led into shambling gaits, and awkward overreaching and stumbling habits, by bad shoeing, than by all other causes combined. And when the horse has acquired these habits, he is check-reined, martingaled, and abused in other abominable ways, because he does just as his owner ought to have known he would do under such a course of shoeing!

LOVE ALL.

BY C. D. STUART.

Love all! There is no living thing
Which God has not created;
Love all! There is no living thing
Which God has ever hated.
His love sustains the meanest life—
Whate'er doth live or perish—
And man may not disdain to love
What God has loved to cherish.

Love all! For hate begetteth hate,
And love through love increaseth;
Love all! For hate shall faint and fail,
While love, like God, ne'er ceaseth.
Love is the law, the life supreme,
The goal where all are tending;
The hate shall die, the strife shall cease,
But love is never-ending.

ENTOMOLOGICAL DISCOVERY.

The following note from our friend, Mr. S. Maxwell, Jr., describes a discovery he has made, which will prove of considerable value, on account of the ease with which the nit is removed. We have examined a number of plums since receiving the note and find in every case the nit under the brown speck, except where the puncture has exuded gum—then the worm is hatched out and has commenced his depredations.

Curculio.—I have within a week discovered a fact about the curculio which was new to me, and have also found it entirely new to others to whom I have communicated it. All those who have had fruit bitten by the curculio, have probably noticed a little brown spot on the inner edge of the crescent-shaped puncture. That little brow spot covers the egg left by the bug, and the puncture seems to be made for a place of safety for the young worm when hatched, and also to facilitate its oper-

ations in boring into the fruit. Persons having plum trees, and leisure, and wishing to preserve a few of the fruit after it has been bitten, can with the point of a penknife, or with the thumb or finger nail, easily remove the spot from its place, and no harm will come to the fruit except the scar left by it.—*Greenfield Republican.*

For the New England Farmer.

BARN CELLARS, RESTORATIVE GASES, AND OTHER SPECULATIONS.

Messrs. Editors:—Most of the farmers in this vicinity who have renewed their barns have also built capacious, well-constructed cellars under the whole building, at a large additional expense. A little experience has led me to make the following remarks on the subject of barn cellars.

Eleven years ago, I had a cellar constructed under my cow hovel with the intention of sheltering my manure from the weather and saving the liquid excrements, which, under our former management, without a cellar, were mostly lost. The advantages I have realized from my cellar have not but partially answered my expectations. The cellar was closed with matched boards in front, and walled with stones at the sides to keep it tight; the floor over it had openings to let the excrements pass from the hovel into the cellar, which would be nearly full in the spring when wanted for use. On removing the dung from the cellar we found a large part of it dry and hard, and in no condition to decompose into suitable nourishment for immediate food for growing vegetables, the urine not being sufficient to supply the required amount of humidity necessary to promote fermentation, its state of decomposition being quite behind that thrown out at the hovel window and lying the same length of time, which had been kept damp by snow and rain. I am not able to comprehend what loss green manure can sustain in a few weeks while lying in a conical form as thrown from the window before the process of fermentation takes place to disengage the gases, or even afterward within the space of a year. I have known some of our best practical farmers prefer to have their dung heaps lay in that form till they were rotten enough to put in the hills or to spread to top dress grass land. How much the loss is, during the process of fermentation, in the escape of nutritive gases, cannot be ascertained without accurate chemical experiments and nice observation. We cannot make a perfect compost without a large supply of water in the form of rain, or from some other source, and, therefore, I think the rains which fall upon a heap of green manure must rather benefit than injure the process of fermentation and rotting. After housing my dung four or five winters, I have turned back to the old custom of throwing it through the hovel windows again. I believe the gases which escape and ascend from our manure while in a state of fermentation and decomposition descend again on being condensed by some chemical agency in the laboratory of the atmosphere, and fertilize our lands which lie in a state of rest, and as evidence of the truth of my theory, I will refer to practical facts familiar to all farmers of observation who have reared herds of cattle and sheep.

Lands which have been exhausted by cropping are restored to fertility again after supplying a flock of sheep with their food, and their owners with wool, pelts and mutton, after a lapse of a few years, so that they will produce respectable crops of grain again without manure; now how does this happen if the nutritive gases do not return again to the earth in such large quantities as to furnish the sheep with a living, the farmer, with wool, meat, and pelts, and at the same time (after so large a deduction and draught upon the soil) it should continue to gain in fertility so as to produce one or two crops of grain once in five or more years? Those who keep swine in their barn cellars, perhaps have much the advantage of those who do not, as a hog is an animal that never leaves a moveable thing as he finds it, generally examining all sides of it, even if it is excrement of the most offensive kind; his olfactories are such that he appears to enjoy the odor as he would the most delicate perfume, and as willingly works among the most nauseous filth as sport in the fragrance of the garden of Eden. Hogs are called dung makers, which is a very appropriate name, and to those educated in a barn-cellar no one will dispute their merit to the title, but the idea of eating pork saturated with the filth of a barn cellar is revolting to the sensibilities of those who are so particular as to trace effects to causes. The greatest advantage, and that a real one, that I have found from having a barn cellar, is from the liquid excrements being all saved and conveyed through holes in the floor into the cellar where quantities of earthy and vegetable materials are deposited purposely to absorb the urinous effusions from above; in this way we have made very valuable manure for top-dressing of grass land or for grain crops, and are compensated for the extra expense of making a cellar.

The first barn cellar within my knowledge in this neighborhood was made by Col. Loammi Baldwin, the noted engineer of Middlesex Canal, more than half a century ago; after trying it a few years he told a friend of mine who was about building a barn, that he could not advise him to make a cellar under it from any beneficial experience he had received from his own cellar; and my neighbor built a large barn without a cellar, influenced, as he told me, by the Col.'s advice. The effluvia which fly off from our barn cellars and dung heaps are not lost but return again to us with interest, though the same gases may not descend upon the same man's premises where they originated; they appear to be equally distributed by an impartial Providence upon every man's farm, according to his number of acres. The man who enriches his land by plowing in his clover or buckwheat is indebted to the nutritive gases which escape from the decomposition of animal and vegetable substances, and enter life in another form after descending from the great atmospheric laboratory.

Nutritive gases transferred from the decomposition of animal and vegetable substances to be reorganized in the form of buckwheat and clover, constitute a considerable portion of those productions as well as other vegetables; or why should those plants which are entirely indebted to the earth for their sustenance add any fertility to it by being plowed under to decompose there, as the earth would only take back what she gave, and gain nothing by the operation. The chemical operations of the Divine mind as much surpass the

researches of human chemists, as the formation of living animals surpass the manufacture of the imitations contrived by man to represent birds, beasts, and men, or as the power of the Almighty to create is beyond man who tries to imitate.

SILAS BROWN.

Wilmington, June 28, 1853.

APPLE TREES KILLED BY POTASH.

The *New England Farmer* mentions a case where an orchard of one hundred and six thrifty Baldwins were washed with a solution of potash of the strength of a pound to a gallon of water, which killed the whole of them in a few days. In all attempts to doctor seeds, plants, trees, or animals, great caution should be observed. Guano is often used in a way that destroys the vitality of seeds; and in soaking seed wheat in brine, blue stone or copperas water, a similar disaster frequently results by steeping the seed too long. It is better to spread caustic ashes, guano and urine too sparingly than in excessive quantities, or in a too concentrated form. First and last, we have used a good deal of liquid manure, and never add less than five parts of water to one of urine. A pound of potash to five or six gallons of water instead of one, will form a wash of sufficient strength to kill moss on apple trees, and probably the cotton aphis which so abounds at the South. The finest peach trees that we ever saw in any part of our extended country, were treated frequently to a wash of soap-suds after the servants had washed the linen and other clothes for the week. Spent ashes from which soap has been made, and the refuse wash-water are of great value as manures, and particularly to apply to the soil over the roots of all fruit trees. Many thoughtful economical farmers at the North, are careful to apply all soap-suds and kitchen slops not suitable food for hogs, to their compost heaps, which is an excellent plan, for the alkalies in wash-water, in all cases where soap is used, or ley, aids in rendering the silica in the straw, corn-stalks, grass or weeds composted, soluble manure. The object of composting coarse vegetables, is to break down their tissues, and render them an unctious, soluble mass. The caustic ammonia developed in putrid urine; the alkalies in ashes, and alkaline minerals, lime and magnesia, all extract oils from plants and favor their decomposition.—D. LEE, *in Southern Cultivator.*

REMARKS.—That is good sound teaching, and just such as we should expect from Dr. LEE. He not only understands the chemical nature of potash, but by ample experience, its action upon vegetable life. If all agricultural editors could come to the opinion that they not only *do not know everything*, but that many things which *they think they know* should be dealt out sparingly to the people, there would be less error in practice. We were called a few days since to look at a beautiful lot of plum trees, filled with fruit, which had been syringed with a solution of the salts of ammonia; nearly every leaf of them was as dead as they ever are in December; even the hardy currant and strawberry leaves were as dead as though they had been laid on a hot iron, wherever the solution had touched them. The proprietor of the garden informed us that he found this nostrum recommended in the same paper where the "pound and gallon" potash theory comes from.

We do not doubt but either of these may be used without injury to the tree, under certain circumstances, but the practice ought to be abandoned entirely, because we can never control those circumstances.

For the New England Farmer.

TRIMMING PINE TREES.

MR. EDITOR:—Sir, in your paper of the 25th inst., I notice an inquiry of G. F. W., about trimming *pine trees*, and in your *remarks* you ask for information upon the subject. I have a piece of land which has for the last twenty years been coming into pitch *pines*, and as I use *evergreen* boughs to shelter my strawberry beds, &c., in winter, I have, annually, pruned the young pines in November, for the last twelve or fifteen years. I cut the limbs with a saw, close to the trunk; pitch exudes from the wound, and becomes hardened by spring, effectually protecting the wound from the weather. I do not think any injury results from the pruning; it has the same effect as upon deciduous trees, making them grow less *stocky*, which is an advantage where the trees are not close together. Where they grow in thick groves, the limbs die while the trunk is small, leaving a clean trunk, free from large knots.

I have occasionally cut limbs from them in spring—a much larger quantity of pitch exudes, and as the weather is warm, it does not harden over the wound. Yours respectfully,

F. W. MASON.

Dartmouth, June 27, 1853.

REMARKS.—Mr. MASON has done the public a favor in giving his experience on this subject. We had made many personal inquiries among our best farmers, but found none who had made experiments. There is, indeed, very little known among us in relation to the treatment which our forests ought to receive.

For the New England Farmer.

CANKER, OR SOME OTHER WORMS.

MR. EDITOR:—The canker worms, in countless numbers and with astonishing rapidity, are almost universally desolating our orchards. Many noble trees, which a few short weeks ago enlivened the scenery with their beautiful green, now look almost as brown as though the frosts of Autumn had swept over them, and the rest will be likely to share their fate unless speedy measures are taken to check or destroy the little invaders—if they can be called invaders, living, as they do, just where they were born.

Of course, all will depend upon your valuable paper, for information upon this subject, and probably they will not be disappointed. I have heard some express an opinion, that the insect now so common, is not the real canker worm; I think it is; but should be glad to have some one who knows, settle the question; any way, they are bad enough, and they seem almost exclusively to at-

tack our most valuable trees—viz, apple trees—as though they owed mankind a peculiar grudge. While looking over the third volume of the *old New England Farmer*, published in 1825, I think, after something relative to the canker worm, I found on page 327 an article, recommending locust trees, planted thickly through the orchard, as a remedy for their ravages; after reading this I remembered that on my father's farm there was a small locust grove with two or three apple trees standing almost in contact with it. Upon examination, these trees proved to be equally infested with the rest, thus disproving that theory.

Should you think it worth while to insert this, it may help some who, like myself, may be referring to old papers, and find this suggestion, and may not, as I had, have the means of judging of its merits. S. G. E.

Chester, June, 25th, 1853.

THE HISTORY AND CULTURE OF THE MIGNONETTE.

The following, written by Dennis Murray, one of the best gardeners in or around Boston, for the *Journal of Agriculture*, will be read with interest:

It is now an age since this fragrant weed of Egypt first perfumed the European gardens, and it is so far climated, as to spring from seed of its own sowings. The *Reseda Odorata* first found its way to the south of France, where it was welcomed by the name of *Mignonette*, (Little Darling,) which was found too appropriate for this sweet little flower to be ever afterwards exchanged for any other. By a manuscript note in the library of the late Sir Joseph Banks, it appears that the seed of the mignonette was sent in 1742, by Lord Bateman, from the Royal Garden at Paris, to Mr. Richard Bateman, at Old Windsor; but we should presume that this seed was not dispersed, and perhaps not cultivated beyond Mr. Bateman's garden, as we find that Mr. Miller received the seed from Dr. Adrian Van Royen, of Leyden, and cultivated it in the Botanic Garden at Chelsea in the year 1752. From Chelsea it soon got into the gardens of the London florists, so as to enable them to supply the metropolis with plants to furnish out the balconies,—a fact noticed by Cowper, who attained the age of twenty-one in the year that this flower first perfumed the British atmosphere by its fragrance. The author of the Task soon afterwards celebrates it as a favorite plant in London—

"——— the sashes fronted with a range
Of orange, myrtle, or the fragrant weed."

The odor which this little flower exhales is thought by some to be too powerful for the house; but even those persons, we presume, must be delighted with the fragrance which it throws from the balconies into the streets, giving something like a breath of garden air to the "close-pent man" whose avocations will not permit a ramble beyond the squares of the fashionable part of the town. To such persons it must be a luxurious treat to catch a few ambrosial gales on a summer evening, from the heated pavement where offensive odors are but too frequently met with. We have frequently found the perfume of the mignonette so powerful in some of the better streets, that we have considered it sufficient to protect the inhabitants from those effluvia that bring disorder with them in the air. This genus of plants, of which there are a good many species, was named *Reseda* by the ancients, from *resedare*, to *assuage*, because some of the species were esteemed good for mitigating pain.

We find that this sweet *Reseda* has crept into the armorial bearings of an illustrious family of Saxony, by the following romantic tale; the Count of Walsthim was the declared lover and intended spouse of Amelia de Nordbourg, a young lady possessing all the charms necessary for the heroine of a modern novel, excepting that she took delight in creating little jealousies in the breast of her destined husband. As the beautiful Amelia was an only child of a widowed mother, a female cousin, possessing but few personal charms, and still less fortune, had been brought up with her from infancy as a companion, and as a stimulus to her education. The amiable and humble Charlotte was too insignificant to attract much attention in the circles in which her gay cousin shone with so much splendor, which gave her frequent opportunities of dispensing a part of that instruction she had received on the more humble class of her own sex. Returning from one of those charitable visits and entering the gay saloon of her aunt, where her entry or exit was now scarcely noticed, she found the party amused in selecting flowers, while the count and the other beaux were to make verses on the choice of each of the ladies. Charlotte was desired to make her selection of a flower. The sprightly Amelia had taken a rose, others a carnation, a lily, or the flower most likely to call forth compliment; and the delicate idea of Charlotte in selecting the most humble flower, by placing a sprig of mignonette in her bosom, would probably have passed unnoticed, had not the flirtation of her gay cousin with a dashing colonel, who was more celebrated for his conquests in the drawing-room than in the field of battle, attracted the notice of the Count, so as to make his uneasiness visible; which the amiable Charlotte, ever studious of Amelia's real happiness, wished to amuse; and, to call back the mind of her cousin demanded the verses for the rose. The Count saw this affectionate trait in Charlotte's conduct, took out his pencil and wrote for the rose—

"Elle ne vit qu' un jour, et ne plait qu'un moment."

which he gave to the lovely daughter, at the same time presenting the humble cousin with this line on the mignonette:—

"Vos qualites surpassant vos charmes,"

Amelia's pride was aroused, and she retaliated by her attention to the Colonel and neglect of the Count, which she carried so far as to throw herself into the power of a profligate, who brought her to ruin. The Count transferred his affections from beauty to amiability, and, rejoicing in the exchange and as well to commemorate the event which brought about his happiness and delivered him from a coquette, he added a branch of the sweet *Reseda* to the ancient arms of his family, with the motto:

Your qualities surpass your charms.

The mignonette is transformed into a perennial shrub, which dispenses its odors at all season of the year, by the following simple treatment: A young plant should be placed in a garden pot, with

a stick of about eighteen inches in height inserted by its side, to tie up its branches to; as it advances in height, the leaves and young branches being kept stripped off from the lower part, so as to form a stem to the height required, this stem will become sufficiently hard and woody to endure the winter, by being placed in a green house or the window of a sitting room, and may be preserved for several years, if air is given to it whenever the weather will allow, so that the young branches do not become too delicate. As soon as the seed vessels begin to form, they should be cut off, which will cause the plant to throw out a fresh supply of blossoms; but these plants should never be suffered to perfect their seed, as it would greatly weaken them, and generally cause their entire decay; for the sweet *Reseda* is an annual in its proper climate, and therefore naturally decays when it has ripened its seed. It is frequently observed that the seeds of the mignonette which scattered themselves in the autumn produce finer plants than those that are sown in the spring, which should teach us to sow a part of our seed at that season of the year in pots or boxes, kept in frames through the winter, or in a green house.

For the New England Farmer.

BLACK KNOTS AGAIN.

Mr. Brown:—Respected Sir,—I have read with considerable interest the communication (or rather the postscript) of your correspondent J. Lee, of Salisbury, Conn. My object in noticing it at this time, is not so much to convince Mr. L. by my words, but to put *him* as well as *others* in a way to *convince* themselves. It is no wonder that he did not find very distinct traces of insects in old knots of last year's growth, for the grubs leave early in August, and the knots enlarge and alter their shape very much after that time. But now is the time, the present month of July. Watch carefully the first swellings, (they will be difficult to find, for they do not turn black until late in autumn,) mark them well, and dissect them from time to time. The grubs are so minute at first that it will require a lens to discover them, but will in a short time become visible to the naked eye, then cut out sections of the limbs, and follow the practice described in my communication published in the March number of the *New England Farmer*. And if the result does not prove the same, Black Knots must be different, in different localities.

I stated in my communication to the March number, that the warts had almost entirely disappeared in New Haven, and its vicinity within three or four years. Such was the fact for two or three years, but I find, upon examination, that they were as numerous as ever last year in some locations.

I have perused, also, with much interest, the article on black knots, copied from the *Horticulturist*, published in the June number. The writer has evidently paid much attention to the science of Entomology, and has followed a very *judicious* course in his war of extermination. But in my opinion he has carried on his operations against three distinct species of insects, instead of one. The one that punctured the twigs with a sting or Ovapositor, must have been a species of Cicadae, Locust, for such is the course that species of insect follows. The cluster of eggs, covered with varnish, was probably that of the tent caterpillar, while the black knot insect appears as *yet* unknown to him.

I have made the above remarks more to arouse a spirit of inquiry and investigation, than to arrogate to myself any superior knowledge of the subject. For the study of Entomology is one so intricate and difficult, that one short life is too little to obtain a thorough knowledge of it; it appears, therefore, to be the duty of students in the science to assist each other, although they may differ for a while in their opinions; patient investigation will, in time, bring them to the same conclusions.

Very respectfully,

Mrs. Noyes Darling.

New Haven, June 18th, 1853.

For the New England Farmer.

PROSPECTS OF THE SEASON.

BY A. G. COMINGS.

It is well sometimes to take a look ahead, and see how things are likely to turn out. We are now, [June 25,] sufficiently near the top of the hill, in the season, to desire to see what our agricultural prospects are.

Grass.—Never during May and June, in any season remembered, have our New England pastures been clothed with a garment of more beautiful green. In the mowing fields grass has come forward early, and in this vicinity it now appears as though the crop would be light. Old fields require a cool, wet May, for the best product of mowing grass. The month was not dry; but much warmer than usual, this year. The grass shot up readily and rapidly, but not thick. On old fields, where the soil was not wet and cold, grass is thin, and the crop will be light. On new ground, much of what was sown to grass last year failed to "catch" well. Such ground will of course give but a light crop. Ground newly seeded with clover, in some parts of this county, has suffered much from the absence of the usual covering of snow, during the winter. Many fields show an entire or almost entire loss of the clover, by winter killing. I have seen acres together where the surface of the ground was covered with the roots of clover which had been thrown out of the gound by freezing and thawing. The season is now forward, and much grass, in this vicinty, is losing vitality, for want of more rain. The prospect is not favorable to the idea of a very heavy hay crop.

Indian Corn looks remarkably well for the time of year. If the latter part of summer should be as favorable as the first part has been, the corn crop will be very fine this year. But while we ought always to hope, we ought never to presume. Our expectations may be cut short.

Potatoes have not reached their critical time of life. There has been a great planting, and if there should be a great rotting before the twentieth of September, it will not very much surprise some people. But we hope for the best of potatoes.

Spring Grain has mostly suffered somewhat from the forwardness of the season. Much of it has the usual appearance of grain that is sown when the season is so far advanced that it comes on too rapidly. It grows up thin on the ground, is light strawed and light headed.

The mischievous bugs have annoyed farmers very much. They have left hardly a hope of pumpkins "for Thanksgiving." They have eaten the cucumbers before they could be picked. They have not even waited for a preparation of salt and vinegar. Squashes, summer and winter kinds, have been most mercilessly treated by the army of bugs. But somebody will raise some of all these things "for seed," undoubtedly.

The prospect is that there will not be much crowing about *fruit*, next fall. There are two reasons. One is, there are not so many of those wonderful roosters kept now, as were once. Crowing is therefore becoming a little unpopular, since the big Shanghai rooster burst his windpipe in an attempt to give a specimen of Chinese music. The other reason is, the fruit is, evidently, the most of it, destined to be "food for worms," like all fruit eaters. Apple trees in many places look as though some sudden stop had been put to the course of nature. I suppose, however, that it is all very natural for worms to eat, and for trees to look very bare when their leaves are gone, or very uninterestingly when the leaves appear to be dry on the tree. If good winter fruit does not command a price, next fall, it will be a little strange.

There is hope, yet, for a good lot of peaches. The little mischievous chap that bites the plums and the apples does not seem to be so fond of peaches. That is really encouraging. It is always a lucky idea to those who do not raise any, but have some cousins who do, to remember the relationship just at the best time to "go and see the folks and get some peaches." Well, who wouldn't!

We, here in New Hampshire, have our particular prospects. Our Agricultural Societies are wide awake, to make the year tell. Our legislature has had "the ague" over the part of Governor Martin's Message concerning an agricultural commission. They have finally put a wet blanket upon the whole subject and sent it to bed. Whether it will be found to sleep a whole year remains for time and tide to tell and establish. At any rate, the wisdom of this legislature has taken its shape. On this subject the mass of the people have no definite idea, and it is therefore, to them, a matter of indifference whether it goes this way or that.

The hay-season is now upon us. The ground is becoming very dry. The old idea of making hay while the sun shines will not be forgotten. But if hay is scorched excessively under a burning sun it will lose very much of its value, by the crumbling of the leaves and heads.

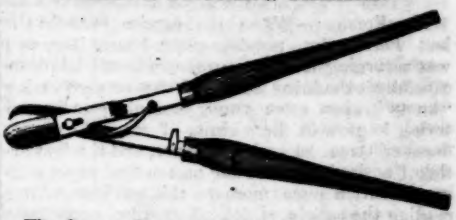
We are all looking forward for better success in all our efforts, in the future. Of what has been, and of what now is, we have some knowledge. But concerning the future all is conjecture. Yet we humbly hope, and every mind struggles in the world of mind to accomplish some desired and desirable service. The agricultural student wrestles violently with the difficulties which oppose his progress; and the plowman studies deep philosophy while he treads the newly opened furrow, and pushes his conquest at the point of the plow.

An interest for the honor of agriculture is fast ripening to maturity. Things as of old are passing away. Scholars will be plow-boys, and philosophers will be farmers. The spirit of this change is touching the springs of motion, and what is to be very soon will be. Ignorance must learn to be ashamed, and the rage of dandyism, in its thousand forms, must give place to that practical common sense upon which the weal of the world depends.

A. G. C.

Mason, N. H.

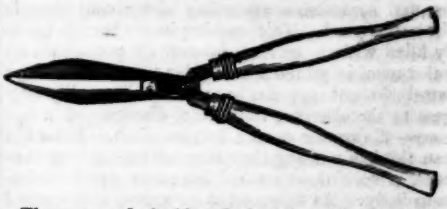
SLIDING PRUNING SHEARS.



The figure above represents a pair of *Sliding Pruning Shears*. They have a movable centre for the motion of one of the blades, by which means, instead of a crushing cut, they make a draw cut, leaving the section of the part attached to the tree or shrub smooth, as if cut off with a knife.

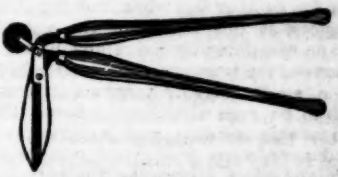
These shears are especially convenient and comfortable in trimming raspberry, blackberry, gooseberry and other bushes that have thorns, or for heading in peach or plum trees.

GARDEN OR HEDGE SHEARS.



These are admirably adapted for shearing hedges, borders of walks, or, if set with a keen edge, for heading in small trees.

GRASS EDGING OR BORDER SHEARS.



These are used for trimming the sides of box and grass edgings, and are constructed with a roller so that the operator may stand upright whilst using them; the one figured here has a wheel attached, which is generally considered an advantage.

ERRORS IN GROWING BEANS.—Lima bean vines are usually suffered to wind themselves around a pole twelve or fifteen feet high, and before the vine reaches the top of the pole, some beans are already of a size to be pulled, near its bottom. Lima beans should be pinched off when five and a half feet high, and they will readily throw out side shoots well filled with pods, which will ripen

before frost; whereas, when not shortened in, the beans on the upper ends of the vine cannot perfect themselves in time to be saved. It is unfair to expect a gill of sap to travel through forty feet of vine wrapped around a pole, and make a perfect bean at the extreme end of it.

BLACK KNOT IN PLUM TREES.

Mr. Editor:—When the carrier brought the last *Farmer* into my door-yard, I met him, as I was returning from my garden, where I had been carefully examining some of the newly forming "knots" upon some young sprouts growing, or trying to grow in the vicinity of an old "purple damson" tree. I took the paper, and the first article I noticed, was the one on the first page, calling attention once more to this subject. After reading the article, which afforded but little light upon this perplexing point of inquiry, and which was chiefly designed to induce careful observation, at this favorable season of the year, I returned to the garden and renewed my examinations, and I will give you what *facts* I have discovered, and my speculations upon them. First the facts. These protuberances, or "knots," commence about the time the leaves open upon the trees, in the character of a swelling, or enlargement upon the side of the limb, and generally upon wood of the last year's growth; always upon young, fresh and sappy wood. Soon the bark cracks open for considerable extent upon the limb, varying from one to six inches, and sometimes extending along continuously for half a yard. This opening in the bark is rapidly filled with a sort of fungus, or porous woody substance, in which the regular fibres of healthy wood do not appear, but which will readily suggest to the observer the idea of disease—of a bad sore—of a *cancer* upon a human limb. Indeed, I can think of nothing they so much resemble as cancers, or scrofulous sores, I have seen upon the human body. As these sores progress, they extend into the *bone*, or into the wood, come to the heart of it, and frequently nearly, or quite round and through the entire limb, and the wood becomes porous, resembling a diseased, carious bone, and dies.

Now for another fact: in examining these protuberances, at this season of the year, I have found, on examining them carefully, near the central parts of the branches, or more prominent portions, a small maggot, very small, but large enough to be seen with the naked eye. My observations this morning, have detected, at least, half a dozen of them, finding one or more in every branch, and often discovering the path, half an inch or more in length, which had undoubtedly been his "path of life," affording him food and shelter thus far in his maggot, or first form of existence. Two or three weeks later than this date, these maggots may be found considerably larger; but never, I think, attaining to more than three-eighths of an inch in length, and the size of a common pin; or possibly a little more. Later in the season I have often discovered their path, extending along an inch or more, through the central part of this fungus matter, and leading out at length, where we may suppose he found himself possessed of a pair of wings, and the power of using them.

Now for my speculations. The inquiry may arise, are these fungi, or sores, thrown out as eruptions appear upon the surface of the human body, from disease in the sap, the blood of the tree? and thus affording a convenient place for the moth, or fly, in which to deposit its egg, become incidentally its birth place and cradle?

Or does the insect, the moth or fly, in the latter part of the season, insert its egg in the healthy bark, or soft wood of the summer's growth, to be hatched out the ensuing season, as the sap flows freely, and the warm sun is felt by it? This latter is, I am confident, the true view of the subject. But what is the cause of such an extensive "knot" or sore upon the limb? Certainly no such result follows a slight incision or wound made in the ordinary way. Is it not probable that Nature has prepared this insect, to propogate its kind, through this peculiar process? and accordingly by a law we cannot fully scan, made its sting, or the deposited egg, act upon the wood as a poison, throwing out just such an excrescence as is necessary to its existence? This is my opinion. And I think the vegetable world affords many examples analogous to this theory. Many a time, in my boyhood, have I plucked a certain forest weed in the pasture, or by the road side, growing perhaps to the height of three feet; the stock grown, and about as large as a pipe stem, and having, somewhere mid way of it, a ball or bulge, an inch in diameter, and perfectly sound. A careful examination of this ball, showed clearly that some insect had inserted an egg in the stock of the young weed, which caused the fibres to part in the centre, and swell out to the size above described, and containing within a pulpy substance, in the midst of which would be, at first, an egg, and then in due time a maggot, which feeds upon the tender juicy substance, Nature has so wonderfully provided for it. In Autumn these balls will be found to have, in the side of them, a small round hole, through which the imprisoned maggot makes his escape.

Similar to this are the round balls often seen attached to the leaves of the oak, and familiarly called "oak apples." They are composed of vegetable matter; their formation is a wonderful specimen of mechanical precision and skill; and yet they grow, or result from the insertion of the egg of a moth or fly, in the fibrous substance of the young and tender leaf. They form a perfect ball, the wall of which is in substance much like the leaf itself, while in the centre of the large chamber within, suspended by fine fibres, extending to the wall all round, is a small sack, or shell, in which at first is an egg, then a maggot, which finally escapes by crawling through the wall of its prison.

Now in these cases, certainly the hermit insect is the prime cause. She lays her egg, and Nature takes it into its fostering care; and though we cannot fully comprehend the subtle principles, by which the process is carried on, yet the facts cannot be disputed. Nature, in her beneficence, regards not man alone, but all living things. By laws the most subtle, by arrangements the most complete, as they often appear to us, yet really the most free and simple, are the wants of all supplied.

Possibly in some non-essentials in the above theory, I may have erred; I may not be correct as to the time when the egg is inserted; when it takes its wings and moves in the air. I have

made no discoveries, that fully determined every difficulty of these points;—but that I am right, as to the prime cause of the "*Black Knots in Plum Trees*," I have no doubt.

In respect to a prevention, I can only say, that in case of the "Curculio" that works upon the *young fruit*, upon the same trees, we must make our efforts in the direction of the insect itself. We cannot prevent the injury to the tree, when the sting is made, the poison inserted. We must find out the fly and destroy him, or apply something to the bark of the trees that will prevent its ravages. —*Maine Farmer*. Z. T.

HAY CAPS.

With the almost uniformly dry months of July and August, as we have had for three years past in this region, the haymaker may say, perhaps, that coverings for the protection of his hay-cocks are unnecessary. But there are sections of country every summer, where the "weather is catching," and large quantities of hay are ruined or much injured. After the grass has been made nearly ready for the barn, the loss is not that of the grass alone, but of the labor also that has been bestowed upon it, and which has now become a part of the value of the crop.

Besides, if there is a way to protect the partially made crop out of doors, it prevents many tons from being injured after being taken in. When the rain comes, the length of its duration is uncertain, and the farmer will often hurry in hay that is not sufficiently cured, and that will heat and become musty in the barn. And then there springs, both from the wetting and the moulding, a disappointment and uneasiness of feeling, that should be avoided, if it can be done without too expensive an outlay.

Again, in curing clover hay, it is absolutely necessary that it should remain out two or three nights, and there is too much risk without some protection to the cocks.

A simple, cheap, and thoroughly effectual remedy against losses by wetting hay, may be found by using sheeting a yard wide, and sewing two pieces two yards long, each, together; hem the edges; turn down the corner an inch, and then that turn another inch, and sew it down strong. This will form a loop, into which a strong twine must be placed. When the cap is thrown over the cock, thrust a pine pin about a foot long through the string at each corner, and up into the hay, which will keep the cap in place, unless the whole cock is overturned.

Your cap, made as above, will be two yards square, which will be sufficiently large to cover half or two-thirds the way down of a common cock; beyond this the rain will do no harm, as the water will not penetrate the hay.

Good firm sheeting, worth eight to nine cents a yard, will shed the rain from the hay through a storm of three or four days' continuance; and the caps will last a lifetime by taking good care of them when not in use.

Take a light nail cask and make a bail to it from part of a hoop, to keep and carry the pins in, and you are then provided with a remedy which will pay its cost in a single season of "catching weather."

For the New England Farmer.

EFFECT OF HIGH CULTURE ON FRUIT TREES.

Mr. Editor:—Your Topsfield correspondent, M., in the *Farmer* for June, has started a very interesting and important question to the Horticulturist, and one which I should be glad to have fully discussed in your columns,—*The effect of high culture upon the longevity as well as the productiveness of fruit trees*. Cultivators very generally agree that previous to planting an orchard the soil should be enriched and deepened by manuring and thorough cultivation. Subsoiling or trench-plowing the soil, when practicable, and that for the first few years at least after planting, the ground should be kept mellow by constant cultivation. The late Mr. Downing says, in his "Fruit and Fruit Trees," "That, before planting, the ground should be well prepared for the trees," and, that "it is an indispensable requisite in all young orchards to keep the ground mellow and loose by cultivation; indeed, of two adjoining orchards, one planted and kept in grass, and the other plowed for the first five years, there will be an incredible difference in favor of the later; not only will these trees show rich, dark, luxuriant foliage, and clean smooth stems, while those neglected will have a starved and sickly look, but the size of the trees in the cultivated orchard will be *treble* those of the others at the end of this time, and a tree in one will be ready to bear an abundant crop, before the other has commenced yielding a peck of good fruit.

Mr. J. J. Thomas, in his "Fruit Culturist," strongly recommends "very thorough preparation of the soil by manuring and deep plowing previous to planting, and that when trench plowing cannot be accomplished, the holes should be 7 or 8 feet in diameter and from one and a half to two feet deep. The earth should be mixed with a liberal allowance of well-rotted manure, or still better with a compost made and worked over some weeks previously, consisting of 2 or 3 parts of muck or peat, one of barn manure, and a fifth part of leached ashes. After planting, thorough, constant cultivation with low hoed crops, and the more frequently the plow or cultivator passes among them the greater will be the benefit to the soil." Again, he says, "The truth should be unalterably fixed on every farmer's mind, that the orchard should have the best piece of land on the farm, so long as clean, thrifty trees, loaded with fair, large and highly flavored fruit, are to be preferred to light crops of half grown and distorted fruit, deficient in flavor; with the additional difference, that the former may be brought into full bearing in one-third of the time required for the later." "If two specimens could be exhibited side by side, the one showing the stunted, lingering, mice eaten and moss covered trees, caused by neglect: and the other, the vigorous and thrifty growth, and the fair and abundant crops, resulting from fine and clean culture;

none could fail to be satisfied of the superiority of the one and the impolicy of the other."

Mr. BARRY, in his "Fruit Garden," says, "No soil, whatever may be its original fertility, can sustain a heavy and continued vegetation for many years without becoming, to some extent exhausted. Indeed there are few people so fortunate, except those who settle upon new, uncultivated lands, as to procure a soil that does not need manuring to fit it for the first planting with trees." The very common practice in regard to the use of manure, is to apply none for several years, until the trees have begun to show signs of feebleness and exhaustion when large quantities are applied, thus inducing a rank and plethoric growth, that can scarcely fail to be seized with diseases. The proper way is to apply a small dressing of well decomposed material, like some of the composts recommended, every autumn." Instances have come under my own observation where trees have been planted by neighbors at the same time with like preparation and procured from the same source; by difference in after cultivation those of one have in the course of five years doubled in size those of the other which were planted in ground seeded down the second year from planting.

My own conviction, Mr. Editor, is, that to obtain the highest possible results from orcharding, the ground should be well prepared—enriched and constantly cultivated. In all published examples of the unusual yield of trees where the attendant circumstances are narrated—we find high culture proved to be an important and inducing cause. The following statement which I cut from a newspaper a short time since will illustrate:—"Mr. Moses Jones, of Brookline, near Boston, a most skilful cultivator, set 112 apple trees, two rods apart, and peach trees between both ways. The eighth year he had 228 barrels of apples, and in a few years from setting the trees $400 worth of peaches in a single year; and the best part of the story is, that large crops of vegetables were raised upon the same land, nearly paying for the manure and labor. The tenth year from setting, many of the apple trees produced four or five barrels each." What effect this forcing, (if furnishing trees every element required to annually perfect large crops of fruit may be thus termed,) will have upon their longevity, I cannot speak from experience. I hope those of your correspondents in possession of facts on this subject will communicate them for the benefit of those less experienced. Will it not be better for the orchardist who seeks the largest profit from his investment, to pursue that course of culture which shall secure to him quick returns with annual dividends, even though it may be proved that trees thus highly cultivated may not endure so long as when the orchard is seeded down and the trees pretty much left to themselves. If by care and culture an orchard may be made to average one barrel of apples per tree, per annum for fifty years, and by a different course the same orchard shall endure for an hundred years and average but half a barrel, which think you, sir, would be the most useful and profitable mode?

A. G. HANFORD.

Waukesha, Wis., June 28, 1853.

TO PREVENT COWS FROM SHEDDING MILK.—*Collodion* [Liquid cuticle] is a somewhat recent discovery, and has been applied to useful purposes by surgeons, but I am not aware that it has ever been used to prevent the loss of milk by leakage from the udder of the cow. The mode of applying is as follows: After milking, take a thin piece of muslin, the size of a three cent piece, wet it in the collodion and apply it quickly to the end of the teat. It dries immediately, and adhering firmly, prevents the escape of milk from the orifice. It can readily be removed at the next milking.

On first making use of this means I did not anticipate anything more than temporarily to prevent the evil. After making a few applications it was discontinued, and I was somewhat surprised to find that it had permanently lessened the fault. Upon reflection, the *modus operandi* appeared as follows: First, the collodion contracts the orifice and thus prevents the escape of milk; and second, the bag becoming distended, its capacity is permanently enlarged. Try it.

Another useful purpose of this article may be mentioned. Cows' teats often become tender from chaps and deep fissures in them. They may readily be cured by moistening a piece of muslin in this liquid and applying it smoothly to the parts affected. It adheres so firmly that it will not be loosened even if the calf is allowed to draw the milk.—*New York Agricultor.*

CIRCULATION OF SAP.

A clergyman of some distinction not long since commenced his Sabbath discourse as follows: "There are some things that I know I know, some things that I think I know, and some things that I know I do not know." We have often thought of this comprehensive sentence when we have read the philosophical explanation of some of our contemporaries, in regard to subjects which we are very much inclined to think might better be classed in the last division of subjects above given, while they speak as if with authority. One of our most judicious writers, who seldom mistakes the imagination for the actual perception, (the learned editor of the *New England Farmer*,) in a recent number says, "The sap is elevated (in the tree) in the same manner as oil rises in the wick of the lamp." We "do not know" that this is not true, but it seems to us safer and therefore wiser to give only as *hypothesis* what must be acknowledged so very far from absolute demonstration. Perhaps the elaborated sap descends "in the same manner," and perhaps too it does not. There are very serious difficulties attending any theory which has undertaken to provide for the circulation of fluids in vegetables. We have little doubt that it is the same system of influences which causes the entire circulation of vegetable juices, which first sets it in motion at the root. But we should be unwilling to assert any thing on this subject, as a matter of absolute truth, beyond the mere fact that their circulation is actually carried on.

Some recent investigations in Europe have been published, which are of considerable importance. They refer to the formation and propagation of cells, &c., and to the circulation of the sap. The former are too purely scientific, without much practical importance, to receive very general attention. The theory on the latter branch of the subject approaches the point of actual demonstration. The results arrived at are, that the nitrogenized elements, which are used by the plant, are

conveyed upwards from the root exclusively through the woody tissue of trees, while oxygen and carbon are absorbed and given out only by the leaf. As this process is essential to growth, the inference is inevitable that there can be no growth when there are no leaves. Whether this is in accordance with supposed facts, we are not so clear. The descending sap, after its preparation in the leaf, descends only *in the bark*, forming new layers on the outside of the wood already formed. Hence cutting a ring through the bark does not prevent the ascent of sap, nor its elaboration in the leaf, nor its descent until it encounters the ring. Here its progress is stayed. The result is a greater growth above the ring, more wood, and *more fruit*. Hence this may prove of practical benefit to the fruit-grower.

The excess of sap, or that portion which is not used up in new formations, enters the wood through the horizontal organs, and again ascends, thus making a constant circuit, as in animals. We cannot believe that capillary attraction does all this. —*Plough, Loom and Anvil.*

Remarks.—Most of us assert that things are so, and so, when we have neither felt them nor seen them. Now we have never *clearly* seen the sap ascend in the plant, yet, from much reading, from long observation, and some investigation, we have become so thoroughly satisfied with this and other theories as to speak of them unqualifiedly as *facts*. At the same time we suppose the general apprehension is, with nearly all, as we have stated. Not that we *know* things as we assume to know when we repeat them under the solemnities of an oath, but use unqualified expressions with regard to things which all know it is not given to finite wisdom fully to comprehend.

We are glad to copy the whole article, that we may preserve the additional value which the writer has connected with our poor remarks.

HOEING CORN.

Some ask how many times it is best to hoe corn and other crops. The best answer to that question was given us a few days since by a farmer whom we had observed often at work in a field of corn in sight of our window. In going over the piece with him, and remarking the remarkable growth, we asked him how many times he usually hoed his corn. "Why," said he, "I do as I was brought up by my father to do. He never had any particular number of times, but hoed it all he could. I find it grows faster, and stands dry weather better, the oftener it is hoed." This is the true philosophy of culture; stir the ground. The direction for early and good crops, after the proper previous preparation, would be to stir the ground. Crops are like animals—they need petting and care. A friend was remarking to us one evening, the difference in the growth of melon vines in a neighbor's garden and in his own, side by side, of the same kind of soil and both rich, with the same kind of preparation for the seed, and the seed sown at the same time. The neighbor's melons were in blossom, while his own, he said, were but three or four inches in height. The difference has been produced by the constant labor and care of the gardener in stirring the ground and regulating the amount of sun and shade, air and moisture they received.—*Hampshire Express.*

A RESIDENCE IN CHINA.

Settled down in the wilds of Kaffraria, away from libraries and books of reference, having no fear of "reviewers" to daunt him, but having a huge and weighty ennui to be cheated occasionally during the uncertain leisure of a tent life, Mr. Power, son of the incomparable and *unreplaceable* Power, turns over the old journals recording his nomadic life, and from their somewhat illegible pages he constructs a most readable and agreeable book.

Mr. Power has not only travelled, he has *lived* in the countries he visited; by which we mean that he not only *saw* them, but tried to realize their life; and his sketches, even when of merely slight externals are always vivid and suggestive. A few extracts will suffice to indicate the variety and amusement crowded into this single volume:—

A TETUAN CAID "RAISING THE WIND."

"He was by no means scrupulous in his mode of acquiring wealth, and regularly 'squeezed' every individual under his government. One ingenious plan of extorting a loan from an unwilling capitalist, was to tie his hands together, and introduce a couple of wild cats into the wide seat of his inexpressibles. This was a way of bringing them to the scratch, which never failed, and by degrees this excellent ruler grew to be enormously rich. The Emperor, thinking at last that his sponge must be full, sent for him to Fez, to have a grand squeeze.

"The wretched old victim was thrown into prison and soundly bastinadoed, a process which relieved him of some of his too plethoric wealth. Strips of cotton, dipped in turpentine, were tied round his fingers and toes, and lighted, which produced a grand haul. The wild cats continued for half an hour to produce revelations of fresh hoards. A knight templar or a Norman king could scarcely have been more ingenious in their financial experiments on a miserable Jew. Renewed tortures produced further discoveries of treasure, till the old man's last doubloon and last breath were yielded up together."

Mr. Power's estimate of the Chinese is by no means flattering: a cowardly, sensual, floolish set of barbarians, for whom no interest but that of curiosity can be excited.

THE VALUE OF AN OLD MAN IN CHINA.

"The reasonableness and placability of the natives were, on one occasion, evinced in rather a remarkable manner at Chusan, while I was there. An Englishman had come across some wild ducks in the canal inside the city, at which he fired with ball, all his shot having been previously expended. The bullet missed the birds, and glancing from the water, killed an old Chinaman, who was sitting at his own door, enjoying his pipe.

"The unfortunate sportsman, horrified at the result of his silly thoughtlessness, hurried away to take counsel with his friends, who recommended him to try to settle the matter with the relatives of the deceased, to prevent their complaint from being laid formally before the authorities, who would be obliged to award a heavy punishment for

such reckless carelessness. With this view one of his friends was dispatched to visit the family, to condole with them for their loss, and to explain how thoroughly it was the result of accident. He deplored the unhappy circumstance which had deprived the family of so valuable and so respectable a member, and pointed out the cheering fact that he was very old, and, in the natural course of things, could not have been expected to live much longer, and that pecuniary recompense should be made to console the family for the few months' society they might have anticipated enjoying with him. They admitted that he was old, very old, and as he could not have lived long, they mentioned a hundred dollars, as a sum likely to have a good effect in assuaging the bitterness of their affliction. The ambassador, delighted at hearing a demand so much more reasonable than he had anticipated, but concealing his satisfaction, pointed out that the deceased was so old that he could hardly have estimated his short remnant of existence at such a large sum; that he had died a very quiet and easy death, and that very likely he was wanted in the other world, so that the unlucky bullet might be esteemed a messenger despatched by the gods. He thought, therefore, that fifty dollars, to make a feast and burn plenty of joss-stick and paper money, would be sufficiently satisfactory to the spirit of their departed ancestor. The matter was finally settled to the satisfaction of all parties by the payment of seventy-five dollars; and I question whether one might not have shot two-thirds of the old boys of Ting-hae at the same reasonable rate, notwithstanding the veneration in which age is held."

ART IN CHINA.

"The drama in China is at a very low ebb. It is still in the strolling state: such as it might have been when Thespis and his company declaimed from a wagon, or rather, such as it was in the middle ages, when mysteries were performed in the open streets and squares for popular edification.

"A wealthy citizen, or, sometimes, the parish or municipality, hire a company of strollers, who erect their stage across a thoroughfare, with little respect for the public right of way. The entertainer and his friends occupy seats in front of the stage, and the tag-rag and bobtail stand in the rear.

"The actors are mere boys, who are dressed in robes of silk and satin, rich with embroidery, but much tarnished and rumpled.

"The subject of the play is usually taken from the life of some hero of mythology or history of China, and the plot is constructed with an attention to the unities of the drama that would have charmed a critic of the French school.

"The narrative begins with the earliest events of the hero's existence, carrying them on in uninterrupted dulness to his apotheosis. The play usually takes hours, and some of them, I have been informed, some days. The spouting and posturing are varied by recitative singing in a shrill contralto key; and every scene begins and ends with banging of gongs and squealing of pipes, occasionally varied by the explosion of crackers, when the interest becomes thrilling, and some great event is enveloped in the noise and smoke, being left, in other respects, to the imagination of the audience."

"There are some dramas which treat of the loves of the heroes, in which little is left to the imagination, although the dialogue is carried on in a lofty rant which never descends to comedy, much less to farce. With such taste, it is not surprising that this species of amusement is not in much repute, and that its professors should be classed with the mountebanks and vagabonds, to whose ranks they properly belong.

"There are no moral lessons to be learnt from the Chinese drama: it inculcates no good principles, nor does it hold the mirror up to nature. Buffoonery, coarse ribaldry, and exaggerated passion, are its chief characteristics; one cannot wonder at the low esteem in which it is held.

"Music is not more advanced. All the singing is in an unnatural falsetto key, pitched as high as possible, so that anything more hideous and ludicrous than the sounds produced can scarcely be imagined. A tom cat caterwauling on the pantiles is the nearest approach I know to the vocal music of this refined nation. They frequently accompany the voice with a kind of violin, the scraping of which is sufficient to put one's teeth on edge. A lute with wire strings and a very wiry tone is sometimes used for the same purpose. The instrument, however, that is to be heard on all occasions, is a sort of pipe, very much resembling the bagpipe in tone.

"The songs I have heard were all of very similar character, and were sung in short cadences, alternating with the symphony, reminding me very much of the Spanish seguidilla, as it is heard screeched by the muleteers in the mountain paths of Andalusia; only that while the muleteer screeches, the Chinaman howls in a way that would excite the sympathy of a whole kennel of hounds, compelling them to join in an obligato chorus.

"Chinese poetry is on a par with the music. It either delights in namby-pamby sentimentality, or puerile conceits. Graceful metaphor, subtle allegory, warmth of sentiment, a picturesque feeling for the beauties of nature, are all utterly unknown; while plays-upon-words, and a studied arrangement of phrases, delight the most fastidious critics, and satisfy their tastes."—*London Leader.*

For the New England Farmer.

STATE REFORM SCHOOL.

Dear Sir:—The remarks in your paper of late, in relation to the Farm School in this place have astounded us all. We had supposed it to be a star of first magnitude in the constellation of the charities of Massachusetts. We were aware that little had been done to increase the products of the farm, but attributed this to the spending of labor in more permanent improvements. It had not occurred to us to suppose any want of care as to the personal condition of the boys: or any defect in the system of instruction pursued.

While the lamented Denny lived, we knew its welfare was a prominent object of his attention, and judging from the report annually published, we had supposed the same vigilant supervision had constantly been exercised. We knew that the late superintendent had been confident in his own opinions—but we supposed this confidence had arisen from his long experience and not from any disposition to resist improvements suggested by

others. It will be a subject of deep regret, if any permanent reproach shall be cast upon the institution, by recent examinations, and still deeper if any radical defects shall be found to exist. If any such do exist, the sooner they are corrected the better. No good reason can be given, why the farm and the institution, shall not be made models worthy of imitation in every State of the Union. When the venerable farmer PETERS owned the place, it was looked upon as one of the best farms in the county of Worcester.

Westboro', June 20, 1853.

INSECT DESTRUCTIVE TO THE APPLE.

The following article which we find in the *Transcript* is timely and appropriate, and we give it in connection with a letter on the preceding page letter from Professor HARRIS.

NOTES FROM THE MEMORANDUM-BOOK OF H. M. SIMPSON, OF SAXONVILLE.

June 18*th*, 1853.—Noticed a new worm upon the apple, cherry, and plum trees, that eats the leaves and fruit. They are upon all the trees of these kinds in the garden.

June 19*th*.—The worm before noticed, which is to me entirely new, is very destructive; it eats the tender shoots and also the fruit. The egg of the perfect insect must be deposited on the end of the shoot as it is growing, and between two apples, if they chance to touch each other; also, between two leaves. If all the worms go through their transformations, there must be swarms enough to destroy the trees in the next generation. This little new comer will require looking after. By jarring the trees, they spin a fine fibre towards the ground, suspending themselves by it, and then again ascend, to commit depredations upon the leaves and fruit. Deposited three of the larvæ with an apple under glass to note their habits and changes. They may be known by three longitudinal stripes on the back; the one in the centre more faint than the other two. They have a buff colored, heart-shaped head, and are naked; have six fore, true legs, and eight fleshy projections, with distinct prop-legs.

June 23*d*.—The larvæ deposited on the 19th have changed to chrysalides. It is very remarkable that this insect is pervading the State and also the adoining States. Almost every person I meet, who lives in the country, has noticed them. Many persons suppose it to be the canker worm, but this is a mistake. The canker worm belongs to a family called Geometers, or earth measurers, that creep, with the habit of forming a loop in the back, by extending the fore part of the body and then drawing up the centre in the shape of a loop. This insect creeps like the commmon caterpillar, and has a remarkable habit of springing backwards when taken in the hand. They do not spin a cocoon, nor any tissue of silk for protection, while going through their chrysalid state. Their length is about five-eighths of an inch.

July 6*th*.—The chrysalides have opened, and the perfect insect proves to be a little moth, with wings of a dark bronze, wavy, changeable appearance. When at rest, they have one scollop at the termination, and are very slender and long in proportion to their breadth; have two feathery projections at the head, with long antennæ, and have a regular taper from the end of the wing to the head. The abdomen is like a delicate, light colored satin, the legs nearly the same, and the insect presents a beautiful appearance under the microscope. They deposit their eggs separately, and do not live in society on the trees, as many of the Caterpillar tribe, but solitary; each one looking out for himself. When at rest, the fore legs elevate the head and thorax, presenting an angle from the ends of the wings to the head, of about thirty degrees. These insects, it is to be hoped, may disappear as suddenly as they have come upon us; if however, they remain, their number must be legion, as already we have had two generations this season.

They may be destroyed by syringing the trees with whale oil soap, when the worm is first hatched; also by placing a sheet under the tree, and jarring it, when those that fall upon the cloth can be easily destroyed, as well as those which suspend themselves by the silken thread which they spin. I suppose the egg to be laid about the first of June. They extend their wings about seven-eighths of an inch.

SALERATUS.

Saleratus is said to be injurious to the human system, and that it destroys thousands of children and some adults every year. In New Brunswick, contiguous to Maine, the physicians are wont to say that half the children are killed by the use of saleratus. The evil is fast spreading throughout the Union. Families of moderate size already use from ten to twenty-five pounds yearly.

REMARKS.—Storekeepers who have been engaged in the business for many years, have told us, that formerly they used to purchase three or four small kegs of saleratus for a year's supply in a country village, but that now they purchase more than as many large casks, weighing some six or eight hundred pounds each. Large quantities are used in making bread, the most common food, and of which all partake. Milk should take its place there. Many persons are in the habit of adding a little saleratus to most kinds of pastry. We are inclined to believe the remarks quoted above have much truth in them. We do not know how far the power of saleratus may be neutralized by a mixture of other substances used as food, but it may be known by the chemist, and should be explained to the people.

For the New England Farmer.

FERRY'S PATENT CROSS-CUT FEED CUTTER.

MR. EDITOR:—Your correspondent from Brattleboro', Mr. Holbrook, says, "farmers are very much in want of a powerful effective chaff-cutter, which shall take in a generous mouthful of cornstalks," &c. I have long felt the need of an improvement in machines for feed cutting; and first I would say they should be so constructed that all stiff stem hay or straw, may be cut at least four inches long; this will induce the animal more effectually to masticate it, thereby giving more nourishment to his feed, and will not be as likely to

injure the passage to the stomach, as when fed on very short hay or straw.

In answer to your correspondent I would say, I think a machine "with a fly wheel, and taking in a generous mouthful, cannot be worked with ease by one man." I intend to manufacture for delivery in October, a machine with a cross-cut motion, cheap, simple, and one that will cut through a sheaf at every stroke of the knife.

L. Ferry.

East Hampton, June 18, 1853.

MUCH LABOR ON LITTLE LAND.

The *Farmer's Companion*, in an article on Small Farms, marks out the following course for the farmer of small capital to pursue:

You have 100 acres clear, 50 of which you keep as pasture and for meadow. Make up your mind to work only 25 acres; the other 25 being put down to clover and timothy, as you best can. You have manure enough in and about your farm for six acres. This year, haul that on to your land, plow it and put in corn; with a little ashes, and, if you can get it, slaked lime or plaster to every hill.—Plow twice as deep as usual; and drag twice as long, with a long-toothed drag, till the land is like a garden. If you have got 35 bushels of corn to the acre before, we can warrant you now 70 or 80; for you cultivate and hoe the corn twice as much likewise. You double your crop at a very little increased cost. Having no more manure, you must depend on deeper plowing and better dragging for the other 10 acres for this year; not forgetting to sow a little more seed than usual, if it is oats or barley. In the fall, sow wheat where the corn was, with the same care; and next spring, manure the next six acres for corn. Yes, but you may manure 10 or 12 acres; for you have had 25 more acres for hay, or oat straw cut green for fodder, and can keep 25 more cows through the winter; and knowing the value of the manure—that it is as important to you as the very soil itself—you will take much better care of it.

Thus, every two or three years, all your land will get a dressing of manure, and every year you will have a different crop on it. Every year *it* will improve, and *you* grow rich, with about half your work. But after a while sow a few acres of this land with clover and timothy, and break up as much of your old grass. You will get doubly the crop of hay on the new piece, and a good crop of grain on the old piece. In one word, of all men in the world, a small farmer should work a small piece of land; work it thoroughly well; keep all the stock he can to make manure; keep the manure dry, and he will not be a *small* farmer long. We have tried it and we know it. For the rest, take and read a good farmers' newspaper.

WAR.

All wars are demoralizing and ruinously expensive,—they blunt the feelings, repress the sentiments of love and mercy, and turn men into hunters of each other more furious than the beasts of prey.

Standing armies, the great provocatives of war, should not be allowed in times of peace. Let those in power so govern as to gain the hearts of the people, and in those hearts they will find the nation's bulwark of safety when dangers threaten. With these willing hearts, and their energetic hands, the raw materials of the mine and the forest would be transformed into engines of destruction, or arks of safety, with more wonderful rapidity than any of the transmutations wrought by the magic influence of Aladdin's lamp. Gnarled oaks, pigs of iron, and bars of copper, fields of hemp, and rivulets of turpentine, would be changed, swifter than vision of alchemist of old ever saw, into the means of aggression or defence.

Those hearts, stimulated by the spirit of liberty, by a love of country, of home and our institutions, would be stouter than the ribs of oak and iron themselves, and *unconquerable*, so long as their cause is just.

EXTRACTS AND REPLIES.

Mr. George J. Colby, of *Janesville, Vt.*, inquires:—"Why could not the price of the Osier Willow be quoted with other products of the farm. I think there are many engaging in the business that would like to see the prices of the imported and American article.

If there are any of your correspondents engaged in the cultivation of the willow, I wish they would tell us with what success."

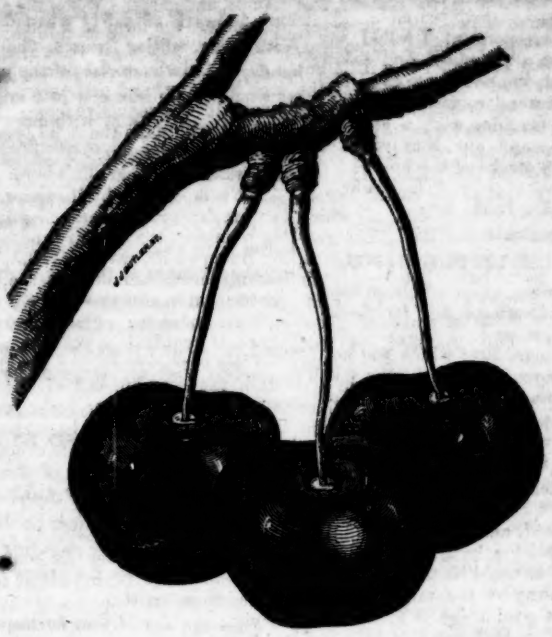
Mr. T. C. Branch, of *Cornwall, Vt.*, in reply to the inquiries of S. G. B. in a late number of the *Farmer*, says that the bottom of the post may be framed into a sill or a pin inserted in it which will prevent its being raised by the frost. He would cut alder bushes after they are done growing; has seldom known them to sprout when so cut.

Mr. Horace H. Winchester, of *Marlboro', Vt.*, says that cows afflicted with garget may be cured by a few doses of the root called garget.

This remedy has been often mentioned in the *Farmer*, and is probably used to some extent throughout New England; but it very often fails to perform the cure.

"J. D.," *East Barnard, Vt.*, says the best way to set posts to prevent the frost from throwing them, is to dig a hole 2 feet deep, 18 or 20 inches across, and fill up within 6 or 7 inches of the top with small stones, then drive tight with the head of an iron bar, then fill the remainder with tan bark. He would cut *alder bushes* in the latter part of August.

Another writer, "S. W.," agrees with "J. D.," that the earth must not come in contact with the posts. He says "alders should be cut in winter when the ground is frozen, and they will die with a very little sprouting. I have long been used to them, have cut them in the full of the moon, in August, and at various other times, and care not whether the sign is in the head or heart, they will sprout unless cut as above stated."



THE BLACK TARTAREAN CHERRY.

This was formerly called the *Double Heart*, in New England, and has also been known by several other names, such as *Circassian Cherry*, *Black Russian*, *Fraser's Black Heart*, &c. The fruit is very large; heart-shaped; skin glossy, purplish black; flesh purple, half tender, juicy, with a rich pleasant flavor; stone small. Ripens, generally, from June 23 to July 4. Mr. ROBERT B. FLUSHING, L. I., a successful fruit grower, gave an account of this cherry in the *American Agriculturist* in 1845.

He says the variety is supposed to have originated in Spain, whence it was transmitted to Russia, and was carried from the last named country to England by Mr. John Fraser. In the account given of it in the "Pomona Londinensis," it is stated to have been introduced into Britain from Circassia, by Mr. John Ronalds, of Brentford, in 1794. It is distinguished for its large, obtuse-heart-shaped, shining purplish black fruit, with an uneven surface, containing a rich, juicy, tender, purplish flesh, and differs from many other varieties in hanging in clusters, which usually occurs early in July, it readily commands in market, double the price of the ordinary kinds.

This tree is valuable also, not only for its fruit alone, but from its vigorous growth, spreading branches, and symmetrical form, it is well adapted for the purposes of ornament, and is well worthy of general cultivation. Downing and Cole, supposed it to be of Russian origin.

HOW THE WATER BOILED AWAY FROM THE POTATOES.

BY J. B. NEWMAN, M. D.

I am residing for the summer with my family in a retired and very romantic place in Connecticut, seven miles from a railroad depot, and some thirty in all from New York city. The distance from the depot makes the weather an object of some consideration in visiting the city. Yesterday was a fine clear day, pleasant for either walking or riding, there being sufficient breeze to moderate to comfort the heat of the sun. Quite exhilarated by these circumstances, I declared at dinner my determination to go early the next morning to New York, as it was just the weather for travelling.

"You cannot go to-morrow," said my aunt gravely; "it is going to rain."

"I see no signs of it," said my wife; "wind like this often continues for days together without any storm."

"I do not judge from the wind, but from a sign that never fails, and that is, the boiling entirely away of the water from the potatoes this morning."

"Did you put in as much water as usual!"

"About the same. You laugh, I see; but it will rain to-morrow in spite of your laughing."

Incredulity did make us merry, and each one began to recount tales of country superstitions generally. In the course of the conversation, some one told a story of an English gentleman, well known in the scientific world, who, while on a visit to a friend, started one morning on a hunting expedition, but missed his way, and inquired of a lad tending sheep to direct him. The boy showed the desired path, but told him it would rain shortly, and he had better return home as soon as possi-

ble. The gentleman, observing no signs of the predicted storm, ridiculed the boy's notions, and proceeded. In the course of two hours, however, he was retracing his steps completely drenched, and found the boy eating his dinner in a little hut near where he had left him. Curiosity as to the source of the knowledge which he had found thus verified prevailed over his desire for speedy shelter, and he stopped his horse, and offered the boy a guinea to enlighten him on this point. The boy took the guinea, and pointed to the closed flowers of the Scarlet Pimpernel, some plants of which happened to be growing near the hut. The gentleman himself had written about this very fact, mentioning that its open buds betokened fair weather and its closed flowers abundance of rain, and hence its title to its common name of Shepherd's Weather-Glass. Fully satisfied, he rode on.

We all allowed that there was some sense in this sign, and that it could be ascribed to the instinct with which nature endowed her children, to guard them from injury.

"But are there not," said my aunt, "some contrivances made to foretell rain? I have seen a long glass tube filled with quicksilver, to which there was a dial-plate attached, and the rise and fall of the quicksilver regulated the hand on the dial, so that changes of weather could be told. I do not see why the boiling away of the water from the potatoes may not be as good a sign as the rise and fall of the quicksilver."

Again there was a laugh at the comparison of the water around the potatoes with the handsomely-finished and expensive philosophical instrument termed a barometer.

The weather continued as pleasant as before, so last evening I packed up my carpet-bag, and made the necessary preparations, requesting them to wake me at five o'clock, and have the carriage ready in time to convey me to the depot.

I awoke this morning, and all was still in the house. Quite pleased to be beforehand with them, I looked at my watch, and with some difficulty, on account of the dim light, found it to be fifteen minutes after six. Much surprised at not having been called, I jumped up, and threw open one of the blinds of the window, but directly closed it again, as a driving rain poured in. The reason why I had been permitted to sleep on was evident enough. I dressed, and went down to the breakfast-table, where sat Aunt H. enjoying her triumph.

On my return to my study, forced as it were by circumstances to do so, I began to reflect on the boiling away of the water from the potatoes, and tried to discover whether the ensuing rain was mere coincidence, or due in some way to cause and effect; whether in reality connected with it or not. The result of my deliberations and subsequent conviction of the connection of the phenomenon with rain I will now proceed to give.

The pressure of the atmosphere, which is about fifteen pounds to the square inch, forces many substances to retain the liquid condition that would, were that pressure removed, assume the form of gases. Of this, ether is an example.

Chemistry assumes that all matter is made up of exceedingly small particles called atoms, and that around every atom there are two atmospheres, the inner one of attraction and the outer one of repulsion. Bodies exist in three forms, as solids, liquids, and gases. When the attractive force predominates, the form is a solid; when the attractive and repulsive forces are balanced, the form is a gas. Caloric, or the principle of heat, is considered by many, and perhaps rightly so, as synonymous with the repulsive force. Hence an increase of heat will make the solid become fluid, and the fluid become gaseous. Thus ice changes to water, and water to steam.

The atmosphere, by its pressure, assists the attractive force in the same manner that heat assists the repulsive, the pressure and heat, of course, acting in opposite ways. Whatever, then, would lessen the amount of pressure, would enable the heat to act more powerfully. A certain amount of heat, under the ordinary pressure of the atmosphere, is required to convert water into steam. The less the pressure, the less the heat required; but if the same amount of heat is applied to the same quantity of water, under such circumstances, the more rapidly will it be evaporated, or, in other words, boiled away. It is evident, enough, then, that if the atmospheric pressure is less at times preceding rain, the water will boil away more rapidly than usual from the potatoes.

I was frequently puzzled in my boyish days by the assertion in scientific books, that the air is lighter in rainy than it is in dry weather. It seemed to me as if the air at such times should be heavier, as, in addition to its own substance, it holds suspended abundance of heavy clouds, which must surely increase its weight. For many years the problem remained unsolved in my own mind, as it is yet unsolved, perhaps, in the minds of many who read this. At last the thought occurred to me, that as the weight of the air *per se* must remain the same at all times, taking it as a whole, did it not really contain more moisture in solution in clear than in rainy weather? And such is really the fact. As water, by the addition of salt, can be made dense enough to float an egg, and as the more the brine is diluted with fresh water, the deeper will the egg sink in it; so is the air, by holding water in solution, rendered dense enough to float clouds at a great height, and the greater the amount of water it loses, the lower do the clouds fall. This very dryness of the air is, in fact, one of the many circumstances that cause rain.

The air then is lighter, the pressure consequently less, and the unusually rapid evaporation of water from the potato-pot is as good and trustworthy a sign of approaching rain as the falling of the mercury in the barometer; and thus the cook in the kitchen may foretel as confidently as the natural philosopher in his cabinet. And yet more, for nature is bountiful: even where the apparatus of the kitchen and the cabinet are denied, she furnishes, without expense to her faithful observers, means even more certain; for the shepherd boy has an unerring guide in the Scarlet Pimpernel.—*Plow, Loom and Anvil.*

☞ *The Australian Movement.*—The London correspondent of the Philadelphia *North American* states that emigration to the Australian colonies has almost entirely ceased, but shipments continue active. The vessels now in the port of London under despatch to the colonies amount in number to 73, and in tonnage 44,657 tons. Freightage is much lower.

PROSPECTS OF THE SEASON.

The drought in all this region continues severe. The *hay crop* on old grounds will be very light; on rather low and moist lands better than last year. Although the present crop is more abundant than last years, there will not probably be more hay in the barn in September, as the high prices since that time have drawn it all out. There is, however, much less stock than there was last year at this time, so that upon the whole, hay will not command a higher price than it brought last year.

Corn has had a fine color from its first appearance and now looks well, and unless on quite dry lands has not yet suffered much.

The *rye crop* is good; *oats* light and *barley* good.

Some fields of the *blue stem wheat*, which we have recently seen are very fine.

Potatoes are suffering; no rains having penetrated to the roots since they were planted.

The *root crops*, unless those sowed quite early, are not promising.

The *cabbage crop* has been extensively injured by the cut worm, in addition to the little imp that usually makes a home in the root.

Vines, such as the various squashes, melons and cucumbers are not looking fresh and vigorous.—They have had to contend with armies of insects as well as drought.

The *apple crop* must be unusually light. One gentleman who usually puts up a hundred barrels has sold his whole crop, whatever it may be, for ten dollars.

On the whole, there is no good cause for despondency. Earnest hearts and hands and economical habits will bring all out right. The Giver of sunshine and rain deals gently and kindly with us in this garden of the world, and home of the oppressed. We shall have enough and to spare.

COMMUNICATION OF IDEAS AMONG CATTLE.

There is a large shallow inlet on the Prussian shore known as the Frische Haff, crossed for the first time by steamers ten or twelve years ago. Upon their way the vessels paddle by a common near the Elbing river, upon which the towns-people turn cattle out to graze. When the first steamers passed this common they caused every flank of beef to quake; such fiends in dragon shape had never appeared before to try the nerves of any cow, or to excite wrath in the bully bosom of the experienced among the warriors of the herd. With tails erect, therefore, and heads bent down, the whole colony upon the common charged over dykes and ditches inland, roaring horribly. Every appearance of the steamer, to the great joy of the crew, caused a panic and a scattering of oxen, until after a few days, the animals had become hardened to the sight, and took it as a thing of course, and meant no harm to them. Now, all the horned beasts on the common during that first year were in the usual way placed there to be fatted. In the following spring they had gone the way of beef, and their place was filled by a new generation altogether. So soon, therefore, as the Haff was clear of ice, and the steamers again began to ply daily upon the route between Elbing and Konigsberg, the sailors were on the alert again to witness the old scene of uproar by the water side. But they were disappointed. Though there was the pasture grounds well stocked with new recruits for the market, who had come from distant island farms or out of stalls within the town, though scarcely one of them—if any one—had ever seen the apparition of a steamboat, not a cow flinched. The members of the whole herd went on grazing or stared imperturbably at the phenomenon. It was a new thing no doubt for them to see—but they had already been told of it. Every spring the first passing of the steamer is in this way regarded by a fresh generation on the common with complete indifference. The experience acquired by its forefathers ten or twelve years ago seems to be now added to the knowledge of every calf, born in any corner of our province. And yet, in what way have these calves been educated? or, if this fact has been taught to them at all, what else may they not know?—*Dickens' Household Words.*

For the New England Farmer.

MANURE FOR LAYING DOWN GRASS LANDS.

Dear Sir:—I have several acres of land which I wish to bring into grass for another year, by turning over, top-dressing and seeding the present season. The soil is a sandy loam, not poor at all, but in common parlance *good*, though considerably run out.

What article will be the most profitable for me to use, considering expense, time, labor and amount of crop? Please answer. (*a.*)

I have seen oyster shell lime advertised as an article desirable to use for such purposes. Please inform me how much should be used to the acre? and what kind of soil it best suits? (*b.*)

Muriate of lime, I also notice. What is the expense per hundred lbs? and how much per acre? (*c.*)

How is guano for similar purposes. What quantity and expense to the acre?

Any information on these subjects will be thankfully received by your friend and subscriber.

L. W. Daggett.

Attleboro' Falls, July 4, 1853.

Remarks.—(*a.*) If near your barn, good composted barn cellar manure.

If not near the barn, Peruvian guano, 300 pounds to the acre, worked in two or three inches with the cultivator after plowing and before sowing the seed.

(*b.*) The oyster shell lime would scarcely be misapplied on any of our lands that have been frequently cropt. The quantity of pure lime contained in the crops produced upon one acre, according to Prof. Johnston, during a four years' rotation, amounts, on an average, to 242 pounds, which are equal to about 430 pounds of carbonate of lime, in the state of marl, shell, sand or limestone grav-

el. Two three and sometimes four hundred bushels are applied to the acre in England, but we think it a better plan to begin with a smaller quantity, say from 10 to 25 or 50 bushels to the acre. The tendency of lime is to stiffen very loose soils and open the stiffen clays.

(*c.*) Five or six barrels of the muriate of lime to the acre. Price $1,50 per barrel.

For the New England Farmer.

PRESERVING TIMBER.

Copperas Hill, Vt., July 9, 1853.

Mr. A. D. Hager:—Dear Sir,—I notice in the *New England Farmer*, your inquiries respecting "Kyanizing timber." I can inform you, that our timber which has been saturated with copperas and exposed to all weather for forty years, is perfectly sound and hard, and has become something of the nature of stone.

Timber that has been soaked in copperas water, say one pound copperas to one pail of water, will last more than twice as long as that which has not been thus prepared. Yours truly,

John Reynolds, Agent
Vermont Copperas Company.

N. B. Copperas is cheap, 1¼ cents per pound.

Proctorsville, Vt., July 12, 1853.

Friend Brown:—I received the above in answer to my inquiry in the *New England Farmer*, and although from a stranger, I take the liberty of sending it to you, as the facts may be thought of sufficient importance to claim a place in that bundle of valuable facts—the *New England Farmer*.

Respectfully yours, A. D. Hager.

THE FABLE OF THE RAIN DROP.

There was once a farmer who had a large field of corn; he ploughed it and planted the corn, and harrowed it and weeded it with great care, and on his field he depended for the support of his family. But after he had worked hard, he saw the corn begin to wither and droop for want of rain, and he thought he should lose his crop. He felt very sad, and went out every day to look at his corn, and see if there was any hope of rain.

One day, as he stood there looking at the sky, and almost in despair, two little rain drops up in the clouds over his head saw him, and one said to the other.

"Look at that poor farmer; I feel sorry for him; he has taken so much pains with his field of corn, and now it is all drying up; I wish I could do him some good."

"Yes," said the other, "but you are only a little rain drop, what can you do? You can't even wet one hillock."

"Well," said the first, "to be sure I can't do much, but I can cheer the farmer a little at any rate, and I am resolved to do my best. I'll try. I'll go to the field to show my good will, if I can do no more: so, here I go." And down went the rain drop, and came pat on the farmer's nose, and then fell on one stalk of corn. "Dear me," said the farmer putting his finger to his nose, "what's that? A rain drop. Where did that come from? I do believe we shall have a shower."

The first rain drop had no sooner started for the field, than the second one said, "Well, if you are going, I believe I will go too, so here I come;" and down dropped the rain drop on another stalk.

By this time a great many rain-drops had come together to hear what their companions were talking about, and when they heard them, and saw them going to cheer the farmer and water the corn, one said, "If you're going on such a good errand, I'll go too;" and down he came. "And I," said another, "and I," "and I," and so on, till a whole shower of them came, and the corn was watered, and it grew and ripened, all because the first little rain-drop determined to do *what it could*.

Never be discouraged, children, because you can't do *much*. *Do what you can*. Angels can do no more.—*Anonymous*.

AGRICULTURE IN FRANCE.

A letter writer for *The Republic* says a trip of six hundred and fifty miles, from the northern to the southern extremity of France justifies me in the expression of my opinion that God's sun does not elsewhere shed its rays on so fair a land, or one so thoroughly cultivated.

The whole country is literally a garden. Every square foot, from the mountain top to the lowest ravine, is made to produce something, if it be susceptible of it. Their mode of planting or sowing their crops whether on plain or hill side, produces the finest effect on the appearance of the landscape; the allotted space for each crop is laid out in squares or parallelograms with mathematical precision, and whether large or small, the best garden could not be divided with greater accuracy.

As there are no fences or hedges, and as the different crops are in various stages of maturity you can imagine the variety of hues that meet the eye, and the magnificence of the panorama that stretches out in every direction as far as the vision can penetrate. I am sorry to add in this connection that seven-eighths of the labor is performed by females, while two or three hundred thousand stalwart men are idling away their time in the barracks in the cities and villages.

In the absence of fences, cattle secured by ropes are driven about their pasturage by females, and sheep are confined within the required limits by boys, assisted by a shepherd's dog. Speaking of cattle reminds me that notwithstanding fresh pork is abundant enough in market, both in England and France, I have not seen a live porker in either country.

Excerpts.—Every plant that is produced, every child that is born, is a new idea, a fresh expression of the wisdom and goodness of our Creator.

Revenge reaps no reward. It is its own most fearful punishment. Its thirst is death. Deeds of horror are its luxuries.

Custom will have the same effect, with respect to death, as to other frightful things; it will take off its terror.

The noblest remedy for injuries is oblivion. Light injuries are made lighter by not regarding them.

No poultice has ever been discovered to draw out man's virtues so fully as the sod that covers his grave.

For the New England Farmer.

SETTING POSTS.

Mr. Editor:—On page 303 of *New England Farmer*, monthly, is an inquiry for the best way of setting posts and manner of building front fence, by S. G. B.

A very durable, and not very expensive way, is to take flat pieces of granite of sufficient size and weight, and in the centre of these, drill a round hole 3 inches deep, then take a piece of round inch iron 20 inches long, and wedge it fast into the hole you have drilled; place the surface of the granite an inch higher than the surface of the ground. Then take a post about 3½ feet long, and in one end of it bore an inch auger hole the length of the iron, 17 inches, and drive on the iron. This makes a very durable post, not moved by frost. After setting the posts the desired length of the fence, placing the posts about 8 feet apart, you can saw into your posts near the bottom, and nail on a joist 2 by 4, and on the top another; to these you can nail your pickets, or you can build with small rails without pickets.

Another way is, and it may not be more expensive where lumber is high, take round iron, same as above, the height you wish to build the fence, sharpen the top as rounds are turned for fence, and on these put two rails lengthwise, one near the bottom, and the other near the top, bored with holes the proper distance for rounds, with an inch auger. This painted, makes a very durable and neat fence for front yards. E. G. C.

Canaan, Me., 1853.

CANADA THISTLES.

Mr. Tappan, in the *Plow, Loom and Anvil*, says that Canada Thistles can be killed by deep and thorough plowing. Or they may be killed by mowing them when they have attained to their full size. He says then the stalks are hollow; the blossoms are red—not much faded; the lower leaves are dead; and the weather warm and dry.

J. H., in the *Rural New-Yorker*, plants his corn on the thistle ground, and after the corn is hoed the last time passes through with a spade and takes out every thistle, root and branch, shakes off the earth, and leaves the thistle on the ground, where the first few hour's sun kills it. This process he follows up for a week or ten days, and the work is thoroughly accomplished.

GOOD TOOLS FOR THE BOYS.

The editor of the *Portland Pleasure Boat* gives the public some excellent practical advice. In an article in which he furnishes some hints in regard to making agriculture a cheerful and agreable occupation, he closes the subjects thus:

Farmers, furnish your young boys with light, neat and good tools, and teach them how to keep them in good order, if you would have them love agriculture, and give them a little lot for their own use.

If you wish to discourage them and drive them off to the city, to sea, or to California, give them rusty hoes, broken shovels, dull scythes, &c., to work with, and not allow them to plant a seed or a tree for themselves. Every boy on a farm should be allowed a lot on which to make a miniature farm. He may have a row of corn, a row of potatoes, a patch of wheat, oats, beans, grass, and if you keep animals give him a calf, a colt, or a lamb to raise.

With the products of his little farm he can supply himself with books, clothes, &c., so that you will be gainers by being liberal, and will encourage industry and beget a love for agriculture in your sons, which will in future years lead them on to perfection in the art, and place them among the highest of nature's noblemen.

LIME FROM GAS WORKS.

Mr. Brown:—Please inform me in your usual way, of the principal qualities, and relative value of the refuse lime of gas factories, when the gas is obtained from bituminous coal, and best time and mode of applying it as manure.

Yours, respectfully, T. H. C.

Locust Lawn, Indiana, 1853.

LIME FROM GAS WORKS.

Gentlemen:—A subscriber to your useful *New England Farmer* solicits the inquiry respecting the lime used at the gas works, for the purpose of purifying the rosin and extracting the ammonia. It is very powerful, and retains a peculiar, strong smell. Can it be used for agricultural purposes? It is very cheap, 25 cents a barrel. Will it answer for decomposing peat—earth, or muck. I have heard of its being used in Essex county, but have not seen notice of it in any paper.

Yours, respectfully, H. S.

Portsmouth, June, 1853.

Remarks.—Will some of our correspondents reply to these letters of inquiry?

Boy's Department.

DUTIES AT SCHOOL.

Quinctilian includes most all the duties of schol ars in this one piece of advice which he gives them—to love those who teach them as they love the science which they learn of their instructors, and to look upon their teacher as fathers, from whom they derive not the life of the body, but that instruction which is in a manner the life of the soul. If they possess this sentiment of affection and respect, it suffices to make them apt to learn during the time of their studies, and full of gratitude all the rest of their lives. Docility, which consists in submitting to the directions given to them, in readily receiving the instruction of their master, and in reducing them to practice, is as properly the virtue of scholars as that of masters is to teach well. The one can do nothing without the other, as it is not sufficient for a laborer to sow the seed unless the earth, after having opened her bosom to receive it, encourage its growth by warmth and moisture; so the whole fruit of instruction depends upon a good correspondence between the master and scholar. Gratitude for those who have labored in our education is the characteristic of an honest man and the tribute of a good heart. "Who is there amongst

us," says Cicero "that has been instructed with any care, that is not highly delighted with the sight, or even the bare remembrance of his preceptors, masters, and the place where he was taught and brought up?" Seneca exhorts young men to preserve always a greater respect for the masters, to whose care they are indebted for the amendment of their faults, and for having imbibed sentiments of honor and prosperity. The exactness and severity of our teachers may displease sometimes at an age when we are not in a condition to judge of the obligation we owe them; but when years have ripened our understanding and judgment, we discern that their admonitions, and a severe exactness in restraining the passions of an imprudent and inconsiderate age, are the very things which should make us esteem and love them. Thus Marcus Aurelius, one of the wisest and most illustrious Emperors that Rome ever had, thanked heaven for two things especially—for his having had excellent tutors himself, and that he had found the like for his children. The duties of school-boys consist in docility and obedience, respect for their masters, zeal for study, and a thirst after the sciences, joined to an abhorrance of vice and irregularity, together with a sincere and fervent desire of pleasing God and referring all their actions to him.

A Promise.—A promise should be given with caution and kept with care. A promise should be made by the heart and remembered by the head. A promise is the offspring of the intention, and should be nurtured by recollection. A promise and its performance should, like the scales of a true balance, always present a mutual adjustment. A promise delayed is justice deferred. A promise neglected is an untruth told. A promise attended to is a debt settled.

Ladies' Department.

An English Woman's Opinion of Husbands.—As a general rule, we know that men have, by nature, a superiority in strength which enables them to go through labors and dangers, mental as well as bodily, from which females should be exempt; and that by education they are qualified for exercising the several trades or professions by which they are to maintain their families. On the other hand, women are endowed (besides all the graces and amiabilities of the sex) with a great superiority of quickness, tact, and delicate discernment, in all the every-day affairs of life. In all these, therefore, the husband ought to be completely guided by his wife. And this shows the wisdom of our ancestors in making the husband "endow with all his worldly goods" the wife he has chosen. The wife is dependent on the husband, and clings to him for support, just as a hop-plant climbs on its pole, and a sweet pea on the stick to support it, and as the vine in Italy was, according to the language of the poets, "married to an elm." But if you could only conceive a hop-pole, or a pea-stick, or an elm, imagining that those plants were put there on purpose for its adornment, you would tell them that this was quite a mistake; that the climbers are cultivated for the flowers or fruit; and that the stakes are placed there merely for their sake, and must not claim any superior dignity or worth over the plants they support. Now just such is the office of the husband; and this statement of things is what people approach to more in proportion as they advance in civilzation.

Household Measures.—As all families are not provided with scales and weights referring to ingredients in general use by every housewife, the following may be useful:—

Wheat flour, one pound is one quart.

Indian meal, one pound two ounces is one quart.

Butter, when soft, one pound one ounce is one quart.

Loaf sugar, broken, one pound is one quart.

White sugar, powdered, one pound one ounce is one quart.

Best brown sugar, one pound two ounces is one quart.

Eggs, average size, ten eggs are one pound.

Sixteen large table-spoonfuls are half a pint, eight are one gill, four half a gill, &c.

Wash for the Head.—"A Mother" asks, "What is an efficient remedy for removing dandruff in the hair, as she has an objection to using an ivory comb?" This objection is well founded, as it increases the evil. The following wash, applied with a small piece of flannel, to the roots of the hair, will be found excellent: Three parts of oil of almonds; one part lime-water; to be shaken up well, and can be procured of any chemist.—*Lady's Book.*

Advertising Department.

☞ A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square of 15 lines, one insertion.....$1,00
For each subsequent insertion.....50

☞ The above rates will be charged for all advertisements whether longer or shorter.

Farm in Westboro', Mass.,

For sale or exchange, for Boston property, situated on the old Grafton road, within ½ mile of the Railroad Depot, containing 27 acres of as good land as any other 27 acres laying in one body, in the town; it is elevated about 75 feet above the railroad, and overlooks the town, and is within 7 minutes walk of three churches and the town house, which for healthy location is unsurpassed. The buildings consist of a modern house, built by Boston mechanics in 1851, and is 32 by 22 feet, with a kitchen attached, 16 by 23 feet, two stories high, with a cellar under the whole. Wood-house, 16 by 20 feet; work-shop 16 by 12 feet; carriage and hen house, 16 by 21 feet; poultry yard, 30 by 53 feet, enclosed by slat fence 8 feet high; barn, 60 by 36 feet, with cellar under the same, so divided as to give a vegetable cellar containing about 2000 bushels; cistern and well water is brought into the house, and all the wash of the kitchen and privy is conducted by a drain to the barn cellar; likewise a farm house 24 feet square, 1½ stories high, cellar under the same; there are three good wells of water and one good brick and cement cistern on the premises. There are now on the farm 142 large apple trees, mostly grafted, also 220 young thriving apple trees, mostly Baldwins, from 4 to 6 years from the bud, some of them have borne fruit; likewise 34 peach trees of early choice variety, 10 pear trees, &c. There has been taken from the farm the past year, 30 tons of hay, 375 bushels of corn in the ear, 700 bushels of carrots, beets and S. turnips, 80 barrels grafted fruit, besides vegetables used in the family. For further information, apply at this office, of Messrs. SIMON BROWN or WILLIAM SIMONDS; at Westboro', of Messrs. FAYERWETHER & GRIGGS.

Feb. 5. 1853. tf

The Farmers' Library.

JUST RECEIVED, the following assortment of Agricultural and Horticultural Books, embracing the standard works of eminent American and European writers, on the Farm, the Orchard, the Garden, &c. &c.

	PRICE.
American Farm Book, by Allen,	$1,00
Farmer's Treasure, by Faulkner and Smith,	75
Dana's Muck Manual,	1,00
Prize Essay on Manures, by Dana,	25
American Muck Book, by Browne,	1,00
Lectures on Practical Agriculture, by Johnstone,	75
Elements of Scientific Agriculture, by Norton,	50
Principles of Agriculture, by Thaer,	2,50
Practical Agriculture, by Johnstone,	75
Agriculture for Schools, by Blake,	1,00
Catechism of Agriculture and Chemistry, by Johnstone and Norton,	25
American Agriculturist, by Allen,	1,00
Liebig's Complete Work on Chemistry,	1,00
Farmer's and Emigrant's Hand Book, by Marshall,	75
Home for all, by Fowler,	50
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For sale at the Publishers' prices by RUGGLES, NOURSE MASON & Co., Quincy Hall, (*over the Market,*) Boston.

Jan. 1, 1853. tf

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The farmers and dairymen of Concord, (Mass.,) and vicinity, who are desirous of improving their stock, are informed that the subscriber has purchased a fine *thorough bred* MALE of the AYRSHIRE breed, which he will keep for the present at his stable, near the depot. JOHN RAYNOLDS.

July 9, 1853. tf

Super-Phosphate of Lime,

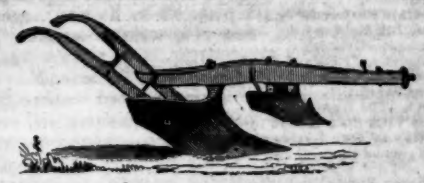
IN bags and barrels, made by C. B. DeBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DAVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer,

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.

March 26, 1853. tf

THE BOSTON AND WORCESTER

EAGLE DOUBLE PLOWS.



THE superior merits of these Plows, consist in,

1. The mode of attaching the forward mould-board to the beam, by which great strength and durability are secured, as also the various desirable changes in depth of work, and relative depth of each plow, the same being regulated to any shade of nicety, with perfect facility.

2. The entire and handsome overturning of the sod furrow, by the forward mould-board, to the extent of the whole width of furrow taken by the plow, placing it beneath, out of the way of the teeth of the harrow, cultivator, or other implement, so that it is in no case dragged to the surface in the after-cultivation of the crop:

3. The thorough and finished work done by the rear mould-board, in taking up its furrow of under soil and sifting or scattering it over the inverted sod, so as to entirely fill to the surface, and at the same time break open any undue cohesion of the soil, leaving the plowed land in a finely pulverized condition, requiring little labor with the harrow or other surface-working instrument,—and indeed, in all tolerably free loams, rendering the use of these instruments, as pulverizers, quite unnecessary:

4. The remarkably light draught of the plow, in proportion to the amount of work and the thoroughness of pulverization accomplished.

Several sizes of the BOSTON & WORCESTER EAGLE DOUBLE PLOW, are made by the subscribers, from patterns of their own original invention. They invite their friends and customers to examine these Plows, as to quality and durability of material, thoroughness and finish of construction, and to test their working properties.

Manufactory at Worcester, and Warehouse Quincy Hall, over the Market, Boston.

RUGGLES, NOURSE, MASON & CO.

April 30, 1853.

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54 (formerly 21) Union, near Hanover St., Boston.

May 21, 1853. 6m

Haycock Covers.

FOR SALE, Haycock Covers made of the leaves of Bamboo, water tight. These mats are very useful to the farmer in getting in his hay crop during showery weather, and will annually save more than their cost in the quality of the hay.

For sale by RUGGLES, NOURSE, MASON & CO.

Boston, June 25, 1853.

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Jan. 1. Over Quincy Market, Boston.

Peruvian Guano.

A FEW TONS, for sale by JAMES GOULD,

No. 70 State Street.

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May 14.

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NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

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